

John Crawford,
M. D.





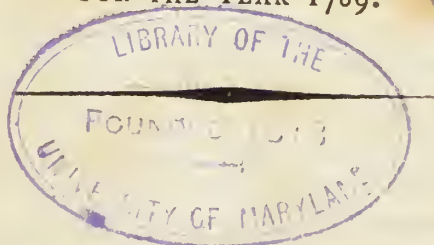


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PART THE FIRST.



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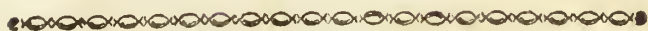
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LONDON MEDICAL JOURNAL.



- I. *An Account of an epidemic Sore Throat which appeared at Chesham, in Buckinghamshire, in the Year 1788. Communicated in a Letter to Dr. Simmons by Mr. Henry Rumfey, jun. Surgeon at Chesham, and Member of the Corporation of Surgeons of London.*

THE disease I am going to describe appeared in Chesham in Buckinghamshire, and the neighbourhood, in April, 1788, and continued to prevail more or less till the month of November following. My description of it is the result of attentive observation in a great number of cases that came under my care, and of much time and labour employed on the subject. I made minutes of every case as it occurred, though without any design, originally, of communicating them to the Public; but the long continuance of the epidemic having afforded me opportunities of observing it frequently, and of extending my remarks, I now venture

venture to submit to your consideration the following account of this disease, to be inserted, if you think proper, in the London Medical Journal.

Both sexes were liable to this distemper, but especially females; and it affected subjects of every age, excepting only such as were far advanced in life; but it was more particularly frequent in children. I had occasion to see several of these attacked with it, who were not a year old; and, in particular, one that had not reached its sixth month, whose tonsils were covered with large white sloughs, which continued several days, considerably affecting its swallowing and breathing; notwithstanding which it recovered.

This disease constantly began with a soreness in the throat; but this soreness was generally so slight for the first twelve or twenty-four hours as to be taken but little notice of, the patients not complaining of pain in the throat, but only of some uneasiness when they attempted to swallow.

I was called to several children a day or two after the disease had taken place, and found them affected with so little uneasiness in the throat, or difficulty of swallowing, that their parents had not suspected any complaint in the
 I throat,

throat, although it was evident, on inspection, from the state of the tonsils, &c.

The throat, on being examined, appeared much inflamed, of a fiery red colour; and, in the course of the disease, the tonsils and uvula were, in some instances, very much swelled; but in others only moderately so. This appearance of the throat, however, differed exceedingly in different patients; and the swelling, even in cases where it was considerable, was attended with but little pain or uneasiness, and that only when the patient attempted to swallow. This was more particularly observable during the summer months; for in the autumn and beginning of winter there was generally more swelling in the throat, attended sometimes with constant pain, and frequently with very great difficulty in swallowing. In a few cases the tonsils and uvula were so much swelled, when the disease was at its height, that it was with great pain and difficulty the patient could get down a spoonful of any fluid.

About the second or third day floughs, which, in general, were of a whitish or yellowish colour, began to form on the tonsils, and sometimes on the uvula, and ulceration took place. In many cases deep ragged ulcers were formed

on one or both tonsils; and in these cases there was generally less pain and difficulty in swallowing than where the parts were considerably swelled without ulceration.

When the throat had been much ulcerated, and large sloughs formed, it was generally a long while before the latter were quite exfoliated or thrown off; and at the distance of six or eight days after all appearances of the disease had subsided, and the patient, from his recovering his strength, supposed his throat to be quite well, I have, on inspection, found a white slough still remaining on one or both tonsils, which gradually separated, and was thrown off.

The mucous glands were a good deal affected. About the third or fourth day a large quantity of mucus, which sometimes had a purulent appearance, was spit up from the posterior part of the fauces. The quantity that some patients spat up was astonishing, particularly for a day or two, towards the height of the disease.

There was likewise a considerable discharge of mucus from the nostrils, particularly in young children; and in these, in a few cases, the eyes were somewhat affected with the same kind of discharge.

The

The parotid and submaxillary glands were frequently enlarged, particularly in children, and sometimes suppuration took place. I met with one case, in a child of three years old, in which, when the disease was going off, an abscess formed on each side of the neck just under the lower jaw. The abscesses burst, and ill-looking ulcers were formed, discharging a very foetid matter; a gangrene succeeded, and the disease proved fatal.

The tongue was generally covered with a very thick, moist crust, of a whitish or yellowish colour, which separated about the third or fourth day. When this crust had exfoliated, the tongue frequently appeared very red, as if raw, and was very tender, as was likewise the mouth, so that the patient could not bear any thing of a sharp taste.

In a few cases little exulcerations were observed about the tongue and mouth, which healed in a few days. When the tongue was clean early in the disease, (if the disease was violent) it afterwards became very dry and parched down the middle, the edges being moist. In a few patients the tongue, towards the decline of the disease, was covered with a brownish

mucus. In general, the tongue becoming clean was not a sign that the disease was diminishing.

The affection of the system varied considerably. The inflammation in the throat, as I have observed, was the first appearance of the disease, occasioning a slight foreness or stiffness in the parts *. In some this continued two or three days, and I have known it continue four or five, before the patient's general health was affected, though more frequently the system became deranged before the end of twenty-four hours. Patients have sometimes told me that the foreness in the throat came on nearly at the same time with the other symptoms; but, on

* This observation may seem to contradict what I have said before (page 8), that the affection of the general system first alarmed the friends of those children in whom the disease had existed a day or two before the complaint in the throat was suspected; but in those cases there was only a slight degree of swelling and tension of the tonsils, uvula, &c., so that the swallowing, at an early period of the disease, was but little affected, not sufficiently so to attract the attention of the parents and bystanders, who were not apprehensive of any disease in the throat. This, however, we need not be surprised at, since in many, who were of an age to describe their complaints, and in some instances even in adults, the uneasiness in the throat was so slight during the first day or two, that little attention was paid to it.

making

making particular inquiry, I always found that the complaint in the throat had been coming on first, and, in general, the day before the other symptoms.

Sooner or later, however, after the disease had existed in the throat, other symptoms came on.

Sometimes a regular cold fit took place, succeeded by the common symptoms of fever, viz. increased heat, frequent pulse, thirst, &c. ; but more commonly the patient felt frequent chilliness through the day, and in the evening the usual symptoms of fever occurred which continued through the disease. Sometimes there was a regular exacerbation of the symptoms in the evening, and a remission in the morning ; at other times these febrile symptoms continued without any observable increase or diminution for several days, till the disease began to subside altogether.

In other patients no regular appearance of fever took place ; but there was a slight derangement of the system, as languor, loss of appetite, and a pulse rather more frequent than is natural ; which symptoms increased in the evening, and, with the soreness in the throat, occasioned restless nights, succeeded by some remission in the morning.

Sometimes

Sometimes sickness and vomiting, and sometimes a diarrhœa, accompanied the other symptoms ; but the stomach and bowels were seldom much affected at the beginning, and indeed not often at any period of the disease.

In many cases a scarlet eruption made its appearance on the skin, (generally over the whole body) sometimes on the first, though more commonly on the second or third day ; but without appearing to give any relief to the other symptoms.

In every instance that came under my observation, where the disease terminated fatally, (excepting those who died of the dropical symptoms to be noticed hereafter) the scarlet eruption took place in a very great degree. The skin appeared very red, (which redness some have compared with propriety to the colour of a boiled lobster) dry, and contracted ; and was intensely hot to the touch : the pulse at the same time being frequent and contracted, but not small and weak, unless towards the close of the disease. There were some exceptions, however, to this observation with regard to the pulse. Where no scarlet eruption appeared, the pulse was often soft, sometimes weak ; and in one or two cases, which I met with in the summer, and
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which were attended with a great degree of debility, the pulse was soft and very weak *.

The eruption had not always the same appearance. In general the skin was smooth, and the efflorescence did not rise above its surface; but in some cases there was a roughness plainly to be felt, particularly in one instance, in a child, where the eruption consisted chiefly of pimples, not much unlike the small pox when it first makes its appearance.

The hands and feet, in many instances, were evidently swollen, and sometimes the patient complained of an itching in the skin. When the eruption had once made its appearance, it generally continued with very little variation till the disease terminated; but where the disease was protracted to a great length, as, for instance, to the ninth or tenth day, the eruption lost its brightness, and appeared rather of a darker colour.

* In adults, where there was but little appearance of fever, the pulse generally beat about eighty or ninety strokes in a minute; but where the febrile symptoms ran very high, it increased to an hundred and ten or an hundred and twenty strokes; and under these circumstances, in young subjects, it often exceeded this considerably.

In

In a few cases, after the efflorescence broke out, a number of little pustules made their appearance about the breast, arms, and other parts of the body, of about the size of millet seeds, and, upon being opened, were found to contain pus. These, when first formed, probably contained only a transparent fluid ; but of this I am unable to speak with certainty, as I never happened to see them till some hours after they had appeared : they generally died away in twenty-four or thirty-six hours. This was not a frequent appearance ; yet in one family, where the mother and four children had the disease, these pustules appeared in all of them excepting one child.

In a patient, (a young man) to whom I was called in June, several white vesicles appeared, about the sixth day, on different parts of the body, but particularly on the breast and arms. Some of these were of the size of a silver penny ; others much larger : some, when cut into, contained a small quantity of a transparent fluid ; but others, upon being opened, appeared quite dry. By the next day they all dried away, and the skin covering them peeled off.

In November it occurred to me to see another case, in which vesicles of a different kind appeared.

peared on the skin. In this patient, who was likewise a young man of a robust constitution, on the sixth day several vesicles were formed on the arms, thighs, and legs. Some of these were as large as a half crown, and, if not accidentally broken, became much distended, partly with a yellow ferous fluid, and partly with a gelatinous substance of the same colour. They were surrounded with a good deal of erysipelatous inflammation, and were not followed by a diminution of the other symptoms; but, on the contrary, from the pain and uneasiness which they occasioned, they made the patient more restless, and rather aggravated the disease. In this case the disease diminished on the ninth day; the urine, which before had contained only a light cloud, now perfectly separated, and deposited a copious farinaceous sediment. The frequency of the pulse, and other symptoms, subsided considerably; indeed the heat (which was never so intense in this patient as in many others) had been gradually abating for two or three days, although none of the other symptoms were lessened before this day*.

* In this patient aphæ appeared as the disease was going off, and continued two or three days after the patient was getting better.

The scarlet eruption was by no means a constant appearance, and therefore not an essential character of this disease.

The degree in which the system was affected was not always in proportion to the degree of violence of the disease in the throat.

As this disease differed much in the degree of violence in different patients, so did the time of its duration vary. Where the affection of the throat was slight, and attended with little affection of the system, the symptoms subsided in a few days; in general upon the fifth or sixth day, sometimes later, the symptoms diminished.

In some cases critical appearances took place on the sixth day; such as a diminution of the swelling in the throat, and difficulty of swallowing where that had been troublesome; a diminution of the heat of the body, and of the frequency of the pulse; a moisture on the skin, and sometimes a change in the appearance of the urine. More frequently, however, the disease diminished gradually, without any appearance of crisis.

With regard to the appearance of the urine, it may be observed, that it frequently afforded but little information of the state of the disease, or of the changes that were likely to take place
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in the patient. Sometimes the urine varied in its appearance at different periods of the disease in the same patient. I have likewise seen it turbid while the disease continued; and when the symptoms began to subside, the urine, in some cases, appeared clear, without a sediment; while, in others, a perfect separation took place with a copious sediment. On the other hand, I have observed it to be clear while the disease continued, and become afterwards turbid. Lastly, I have seen it of a pale colour, containing only a light cloud throughout the disease, and continuing with the same appearances after the disease went off.

Delirium seldom took place; but a dull pain in the head was not an unusual symptom in adults.

The disease was attended with but little depression of strength, excepting in a few cases I met with in the summer; but I never saw any signs of putrefaction.

In every case where the scarlet eruption appeared, as soon as the disease went off the skin began to scale, and a complete desquamation took place; but this I did not observe to be the case where there was no efflorescence on the skin. Sometimes this change began to take place be-

fore the disease was entirely gone off. In a girl, about seven years old, the skin seemed to be falling off in branny scales two or three days before she died. Where the scarlet eruption prevailed very much, the skin, in most instances, (I think I may say constantly) was remarkably dry.

The disease was certainly infectious, as appeared from its attacking several in a family, and some nurses who attended the sick.

That the inflammation in the throat is to be considered as the essential character of the disease is evident from this circumstance, that many had the disease in the throat in whom no scarlet efflorescence appeared on the skin; but I did not meet with a single case where this appearance took place in the skin without some affection of the throat.

The first instance of the disease that occurred to me I supposed to be a case of scarlet fever simply. The patient was a child, three years old, who was seized, on April the 13th, with symptoms of fever, which continued the whole night, and in the morning an universal scarlet eruption was observed. As the child was not observed to swallow with difficulty, and no instance of sore throat had then occurred, I confess
it

it did not strike me as a case of that kind, and therefore I did not think of examining the throat. The tongue was covered with a thick white crust, exactly similar to what I have met with in almost every case since; and in four or five days the submaxillary and parotid glands were swelled considerably. The child swallowed then with difficulty; a large quantity of mucus was discharged from the nose, and other appearances succeeded, similar to what I have met with in a variety of cases since, so that I have not a doubt of its having been the same disease.

This disease carried off but few patients, considering the great number who were affected with it. Those, whom I had an opportunity of seeing, who unhappily fell victims to its violence, continued several days from its attack. One or two children lived to the ninth or tenth day; but in some instances the disease proved fatal at an earlier period, and in one or two even so soon as the third day. I met with one singular instance where the patient lived nearly a month from the first attack. In this case, at the time the disease was expected to subside, there was but little abatement in its appearance, and the patient continued to live, under an irregular

gular train of symptoms of great irritability, to the twenty-seventh day. In this patient aphthæ appeared at the end of the second week. Cases somewhat similar to this are mentioned by Dr. Withering in his Treatise on the Sore Throat and Scarlet Fever*.

In this disease the difficulty of swallowing did not appear to arise so much from the uneasiness occasioned by substances passing over the diseased part, as from the difficulty in bringing the necessary muscles into action.

There was something peculiar in the appearance of the throat ; for large sloughs were often formed, and when they were separated (which I have observed was frequently not till some days after the disease had subsided) the surface of the part had not the appearance of a common ulcer, with granulating flesh secreting pus, but seemed to be skinned over : I say frequently, for this was not constantly the case. The slough often looked as if it was nothing more than the coagulable lymph thrown out on the surface of the tonsils, &c., and coagulated, and this I believe was sometimes the case ; but on viewing the parts, even with a slight degree of atten-

* Page 8.

tion,

tion, in many cases there appeared evidently a loss of substance, and some appearance of pus, which must have arisen from ulceration.

As this disease assumed such very different appearances as those I have been describing, it may be suspected perhaps that there were two diseases prevailing at the same time; one properly called scarlatina anginosa, and another, a different disease, verging to what is called the true ulcerous or malignant sore throat. But this I am confident was not the case; for the same contagion acting on different constitutions occasioned great variety in the appearance of the disease; so that sometimes a patient, in whom the scarlet appearance was very considerable, communicated the disease to another, in whom no such appearance took place, and *vice versa*.

This seemed to be the same disease as that which prevailed at Birmingham in the year 1778, and which is described by Dr. Withering; or at least a modification of it, for in several circumstances there was a material difference, viz. in the appearance of the throat, state of the pulse, degree of debility, &c., as must be evident to any one who will compare the descriptions of the two diseases.

This

This disease is called by many *scarlatina anginosa*. It may appear trifling to dispute about names; yet when names are applied, which give an imperfect or wrong idea of a disease, they are certainly exceptionable: and with the utmost deference to those respectable authors who have described this disease under the name of *scarlatina anginosa*, I cannot help thinking it an improper term, as it gives an idea of the scarlet eruption being an essential part of the disease, and constantly making its appearance, which is not the case; for I have met with many instances, as I have already mentioned, where the disease existed, and that in a great degree, without any discolouration of the skin. *Scarlatina* will, therefore, only apply to the disease under certain circumstances.

Sydenham has described a simple scarlet fever where there was no affection of the throat. It is described also by other authors; yet it is a disease which rarely occurs: for Dr. Cullen observes, that in all the instances of scarlet fever which he has seen, the disease, in almost all the persons affected, was attended with an ulcerous sore throat, or was what Sauvages calls *scarlatina anginosa*; yet Dr. Cullen seems fully of
 opinion

opinion that there is a scarlet fever not necessarily connected with an affection of the throat *.

When I first met with this disease, seeing large floughs quickly formed on the tonsils, I fully expected that it would soon assume a putrid appearance, particularly as the summer was advancing, and that it must be considered as the true ulcerous sore throat. I was the more inclined to this opinion, as I remembered that the disease, called by some authors *scarlatina anginosa*, was considered by the learned and ingenious Dr. Fordyce, in his lectures, as being the same disease as that which he calls the erysipelatous sore throat, or what is commonly called the ulcerous or malignant sore throat. But our epidemic not being attended with that depression of strength, irritability, and disposition to assume a putrid appearance, which so strongly characterize the erysipelatous or ulcerated sore throat, soon convinced me that it was a different disease, or so different a modification of that disease as to require a different mode of treatment; for in the erysipelatous sore throat the most successful practice (and that which is

* See First Lines of the Practice of Physic, 4th Edition, Vol. II. page 189.

particularly inculcated by Dr. Fordyce in his lectures) is to give large quantities of Peruvian bark, and that early in the disease, otherwise the patient is in danger of being cut off very soon : but I met with very few cases where the Peruvian bark was necessary or proper to be given, excepting towards the decline of the disease, and then it was but seldom required, and in moderate quantity. In by far the greater number of instances relaxants alone were depended upon throughout the whole course of the disease ; which in the true erysipelatous sore throat would have been a very unsuccessful practice.

This disease differed from the common inflammatory angina in having sloughs, and oftentimes ulcers, formed on the tonsils, &c. ; and in there being no disposition to terminate in suppuration, not even in those cases where there was considerable inflammation and painful swelling, without any or with very little appearance of slough or ulcer*. Moreover, the state of the system was not general inflammation,

* I met with one case of the common inflammatory angina in June, which, being left to itself, suppurated ; and was attended with the usual symptoms of that disease.

commonly called inflammatory fever, which consists in an increased and strong action of the blood vessels, as is the case in the pure inflammatory angina.

In this, as in every other instance, we are not to distinguish the disease from other diseases by one or two symptoms, but by a comparative view of the whole disease. With regard to the method of distinguishing diseases in general, I cannot help mentioning an observation of Dr. Fordyce. — “ Diseases,” says this experienced and sagacious Physician, “ have been
 “ attempted to be distinguished from one another by pathognomonic symptoms, that is,
 “ appearances which were always present when
 “ the disease was present, and absent when the
 “ disease was absent ; and lately they have been
 “ attempted to be distinguished in another manner, in that same kind of division which has
 “ been introduced to distinguish plants, by making artificial classes of them, joining together diseases which only agree in one symptom, as pain in the side for example, &c.,
 “ but with as little success. If there were pathognomonic symptoms of diseases, that we
 “ could make that kind of classification, and
 “ so distinguish them, it would, no doubt, be

“ very advantageous ; but the same disease varies so much in different cases, that neither of these things can be done ; we can only distinguish them by being master of the whole history of the disease.”

Dropical Symptoms.

After the disease had gone through the course just now described, a second set of symptoms frequently arose, manifesting an anasarcoꝝ state of the whole body, which to many were troublesome, and to some even fatal, although they came on in so gentle a manner as too frequently to give the patient little reason to suspect any danger from them. These symptoms generally took place about a week or two after the other morbid appearances had subsided. The patient, whose constitution had not yet recovered its strength, became universally anasarcoꝝ ; the breathing became somewhat laborious, particularly when in an horizontal posture ; the urine was small in quantity ; the appetite, which had in some measure returned, now diminished, and debility of the whole constitution slowly increased.

This part of the complaint, in some, was readily removed ; but in others it was very obstinate

stinate and alarming. I met with two cases where it proved fatal, and that in a very short time. The first of these cases occurred to me in May. The patient was a girl, between three and four years old, who, about a week after the other symptoms had subsided, was observed by her mother to be somewhat swelled universally. The next day the swelling rather increased, and the child breathed with some difficulty; but as there were no other threatening symptoms, and the patient's general health did not seem much impaired, her mother thought it a matter of little consequence, and supposed that by some purgative medicine the swelling might be carried off. Accordingly the next morning (which was the third from the coming on of the anasarca) she gave the child a dose of jalap, which purged her moderately. In the evening, however, the patient was evidently getting worse, though incapable, from her tender age, of giving a particular account of her complaints; but laying her hand on her stomach, she expressed a sense of pain in that part. She breathed with difficulty; her skin felt very hot, and she passed a very restless night. The following morning the difficulty of breathing increased very fast; she became insensible; her

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countenance very pale, and much altered ; and in two or three hours she died. I did not see this child till within an hour of her death. I requested leave to open the body, but the father of the child was unwilling.

The other instance was that of a boy, four years old, in whom the disease began in the same way, but its progress was not so rapid. When the anasarca symptoms commenced, the parents of the child, as in the other case, were not apprehensive of any bad consequence, no symptoms, which to them were alarming, having appeared till a day before the child died. The disease in the throat, and the symptoms immediately connected with it, had gone off about ten or twelve days when the child was observed to be universally swelled. His countenance, at the same time, was pale ; his appetite failed ; he made but a small quantity of urine ; and, in an horizontal posture, his breathing was much affected, so that he passed very restless nights. On the 28th of September, which was nearly a fortnight after these dropical symptoms had been first observed, the symptoms increased considerably, particularly the affection of the breath ; and the day following I was desired to see him for the first time. He appeared to be really in
articulo

articulo mortis, his breathing being very laborious, his face bloated, his eyes dim, his countenance of a dead paleness, and his lips of a dark purple hue. He foamed at the mouth; his pulse was small, frequent, and irregular; every muscle of the body appeared to be in a state of convulsive agitation: he seemed to be totally insensible, and was incapable of swallowing. These symptoms, to my surprise, after a few hours, diminished, and he appeared to be much altered for the better; but in the evening they returned again with great violence, and in a few hours he died.

A girl, about ten years old, was likewise attacked, in October, with very threatening and alarming symptoms. In two days after the dropical swelling had commenced, very great difficulty of breathing came on, which appeared evidently to be a spasmodic affection. It continued several hours; but by means of repeated doses of æther her breathing became easier and calmer.

This affection of the breathing returned with considerable violence, at intervals, for ten or twelve days, sometimes three or four times in the course of a day and night, and was as often removed by a dose of æther, which was always kept

kept in the room to be given immediately on the coming on of this complaint. Moreover, she was subject to such violent retching for more than a week, that she could hardly keep any thing on her stomach, either of food or medicine, excepting the æther. Her countenance was pale and bloated ; there was some swelling all over the body, though not in a great degree ; and she was so debilitated, that she could not sit up many minutes together. At length, however, this spasmodic affection returned with less frequency and violence, and her stomach became more settled, so that she could bear some strengthening medicines, viz. extract. cascarill. and myrrh, in the form of pills, in small doses. Afterwards she took larger doses of these medicines, was able to eat a little nourishing food, and seemed to gain strength. In the mean while she made a larger quantity of urine, and the swelling gradually subsided. The same mode of treatment was continued for some time, with the addition of the *ferrum ammoniacale* ; her sickness entirely left her, her breathing became easy and natural, and she recovered her former health.

Of the Mode of Treatment.

At the beginning of the disease, if the stomach was affected with sickness, an emetic was useful ; and in most instances I thought it best to begin with a remedy of this sort, not only with a view to clear the stomach of its contents, but likewise to promote the secretions, in general, by producing universal relaxation in the small vessels. Afterwards, if the body was constive, rhubarb, manna, senna, &c., given so as to procure a few stools, were useful ; but violent purging was to be avoided, as it tended to induce too great a degree of debility without diminishing the disease. If the bowels were in the opposite state, (viz. if there was a purging) after an emetic, a dose of rhubarb was proper ; and if the purging still continued, the *pulvis e creta compositus*, and ipecacuanha in small doses, were given with advantage, or small quantities of opium. This last medicine, however, unless the purging was very violent, was not attended with much advantage ; and indeed, in general, it was rather hurtful in every stage of the disease. I tried it towards the close in cases where the disease had been protracted to a considerable

length, but it was almost constantly disposed to act too powerfully as a narcotic; and after this effect was over, the irritability of the body was evidently much increased: I likewise administered it in different doses, but its effects were such, that I found it necessary to omit it almost entirely.

Bleeding, from the system, was, in general, not indicated. In one instance only, which occurred to me in April, I ventured upon it. The patient was a strong young man, who had considerable inflammation and swelling in the throat, and pain in the head, with heaviness; his pulse was full and strong. The blood was not sily; and although the patient recovered, the bleeding was not attended with such advantage as to induce me to adopt the same practice in any other case. But topical blood-letting, viz. by applying leeches to the temples, was useful in the few instances in which I tried it, where the patient felt much pain in the head, with giddiness; and in one or two other cases where delirium took place, it was likewise attended with advantage.

The frequency and contraction of the pulse, and very great dryness of the skin, with excessive heat, which were such constant symptoms
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in cases where the eruption appeared, and likewise in many instances where there was no eruption, strongly indicated the use of relaxants. Accordingly they were freely administered, viz. the preparations of antimony or ipecacuanha, and the neutral salts.

The antimonial which I generally used was the *antimonium tartarifatum*, given in as large doses as the stomach would bear without sickness: I often joined with it some neutral salt, viz. *aqua ammoniæ acetatæ*, or *kali acetatum*; or, if a laxative was wanted, I gave *kali tartarifatum*, or *kali vitriolatum*. In cases where the *antimonium tartarifatum* acted on the intestines too much, or if there was already a disposition to purging, I gave ipecacuanha, in doses of about a grain, every four or five hours.

The effect of these medicines was not, in general, very striking, though I am persuaded that, when they were regularly persisted in, they diminished the violence of the disease by reducing the frequency of the pulse and intense heat; and although their relaxing effects were not shewn by a moisture on the skin, which is commonly the case in other diseases, they were nevertheless advantageous. From the perfect dryness of the skin, which I constantly observed

when the scarlet eruption made its appearance in a great degree, and the desquamation of the skin, which never failed to take place, I suspect that the organization of the cuticle was so far altered by the peculiar nature of the disease as to render it almost impossible for any sweat to break out.

I was the more convinced of the propriety of persisting in the use of relaxants, from observing that whenever a gentle sweat took place spontaneously, the disease terminated sooner, and was less violent. In some cases where there was an obstinate dryness and heat of the skin, I applied fomentations to the lower extremities for a considerable time together, and repeatedly, but I never saw any advantage from them.

If, towards the decline of the disease, the pulse became weak, and the heat of the system diminished, and the patient's strength seemed to be sinking, it became necessary to give stimulants, and to allow them wine. Indeed, at an early period of the disease, this mode of treatment was often useful where there was no great heat, (which was often the case where no eruption appeared) and the pulse was rather soft. If there was at the same time contraction and dryness of the skin, small doses of *antimonium*

+

tartarizatum,

tartarifatum, or of ipecacuanha, were also given with advantage. The medicine which I commonly used as a stimulant was the contrayerva root, given in substance, and sometimes joined with camphor. In a few cases which I met with in the summer months, and which were attended with an unusual degree of debility, the Peruvian bark was given in large doses with advantage; but in a few other instances in which I employed this medicine, with a view to support the patient's strength, it was not administered till towards the decline of the disease, and then only in decoction, in which form it was attended with good effects.

In several cases where there was a great deal of inflammation in the throat, with pain and swelling, I applied a blister to the throat, but without ever being able to observe any advantage from it. I therefore generally used a strong volatile liniment, viz. *linimentum ammoniæ fortius*, and, if there was much external swelling, it was of some use, otherwise I could not see any benefit arising from it. What I found most useful, as an external application, was the *linimentum camphoræ*. This I did not try till towards the close of the epidemic, and therefore had not an opportunity of seeing it applied in a
great

great number of instances; but where it was used it certainly produced good effects. This liniment stimulated the skin, and by a pretty constant application excoriated it. I found it better, therefore, not to apply it too frequently: a piece of lint was dipped in it and laid on the throat, and renewed every four, five, or six hours, or oftener if the disease had run to a considerable height before it was used, and the swallowing was become very painful. The patient was enabled to swallow much better after its application, probably from its stimulus affecting the muscles subservient to deglutition.

It was necessary to gargle the throat frequently, as a large quantity of mucus was apt to be collected about the tonsils, &c. The common gargles were used for this purpose, viz. *infusum rosæ*, with the *mel rosæ* or *tinctura myrrhæ*; or a decoction of contrayerva root, &c. In cases where the patient complained much of pain in the head, a blister on the back was useful.

Many instances of this disease occurred, in children, in which nature might be said to effect a cure with little or no assistance from medicine, topical applications excepted; for in these cases the quantity of internal remedies we were able to get down was so small, and given after so long

long intervals, that the disease could hardly be supposed to be subdued by such treatment.

The diet consisted of food of easy digestion, as panada, sago, gruel, barley water, or milk and water, &c., and where there was much debility wine (as I have already mentioned) was allowed. In slighter cases, where the system was but little deranged, and the stomach not much affected, more freedom in diet was allowed, and animal broths were taken without inconvenience.

In the dropical state the treatment was very simple, and I believe if the remedies had been early applied, they would have been generally successful. The indications of cure were to restore the patient's strength, and to increase the urinary secretion, in order that the preternatural accumulation of water in the cellular membrane might be absorbed and carried off. Accordingly strengthening medicines and diuretics, such as *rad. colombee*, *flor. chamæmeli*, &c., with the fixed alkalis, were administered with advantage; and at the same time a nutritious diet was recommended to the patients.

Chester,

December 14, 1788.

II. *A Case of Cancer of the Breast; with Remarks. Communicated in a Letter to Dr. Simmons by Mr. T. Hughes, Surgeon at Stroud-Water, in Gloucestershire.*

A Married woman, fifty-four years of age, in the month of July, 1783, desired my advice for a lump in her left breast. About a year before, she had, in falling, received a blow on this breast, which had been attended at the time with great pain : but the pain, as she informed me, soon afterwards went off, and she experienced no other consequence from the accident for eight months, when she perceived an induration, about the size of a hazel nut, which gradually increased in size, and became painful.

The tumour, at the time she applied to me, was rather above the nipple, of about the size of a walnut, and moveable ; its surface rather flat, and its center very hard. The whole breast, which was small, was diminished in size. The uneasiness she felt was sometimes a dull, heavy pain in the part ; but principally a great smarting, which had induced her once or twice to suppose the cuticle abraded. This smarting was not so much on the principal lump as a little lower down and more externally, towards the axilla, where,

where, upon careful examination, was also found a small moveable hardness : no soreness or smarting was felt when the skin was touched with the finger. She had been a sufferer from cares and anxiety ; and subject, but not in a great degree, to pains (which she called rheumatic) in the limbs from her childhood. She had, likewise, since the disappearance of the menses, about five years before, been troubled at times with giddiness, which had, however, lately left her, so that she had for more than a year omitted her usual blood-lettings. Her general health and complexion appeared to be good.

My opinion was, that the sooner the tumour was removed the better ; but as her family affairs did not permit the performance of an operation immediately, after taking away some blood and administering a purgative, I ordered in the mean time the cicuta internally, and externally an application similar to that of Du Mare's tincture, recommended by the late Mr. Justamond.

Six weeks afterwards she applied to me to have the operation performed. The tumour was but little enlarged, and was quite free from adhesion to the pectoral muscles, but its center adhered to the skin, and I was concerned to find a

cluster of indurated glands in the axilla, some of which lay high up. The pain in the breast was nearly as before, worse at some times than others, and it seemed, as she expressed it, “ as if there was something alive in it :” when the breast was most painful, the glands in the axilla were sore and uneasy. She had noticed the glands in the axilla about three weeks ; and before that time she had often observed a numbness in the arm.

I requested Dr. Snowden to see her. The result of a careful examination was, that, although we were apprehensive of a return of the disorder, it would be better to take the chance of the operation than leave the disease to take its course ; as in all probability ulceration would, in that case, soon take place, with all its consequences ; and this being represented to her, she determined to abide by the resolution she had before taken.

A spare diet having been directed, and a gentle purge given, I performed the operation on the 15th of September, in the presence of Dr. Snowden, who afterwards visited her occasionally, and assisted with his advice. For reasons which shall be given by and by, I had determined to conduct it in such a manner as to attempt an
union

union of the wound by the first intention. Although the tumour of the breast was small, on account of the indurated glands in the axilla and the small lump betwixt them and the principal tumour, I thought it best to make but one wound, sufficiently extensive to admit of the removal of every diseased part without embarrassment; and the adhesion of the tumour to the skin was so very close to the nipple, that it was not prudent to save it. Therefore, beginning the first incision at the axilla, it was carried on with a sweep below the nipple near to the sternum, from whence the second incision was begun, carried above the nipple, and terminated in the first on the side of the breast towards the axilla; the skin in the center betwixt the two incisions being about an inch wide, and the angles, where the incisions met, being made very acute, to prevent future puckering of the skin. The principal tumour and the small lump on the side of the breast were then readily dissected out, together with the remainder of the glandular and fatty part of the breast; and afterwards the glands, to the number of four or five, were cautiously removed from the axilla, with a considerable quantity of fat and cellular substance. Upon careful examination, every diseased part

appeared to be removed. During the operation the blood sprang from two or three arteries, of which the most considerable was one in the axilla, but was suppressed by the pressure of a finger so as not to flow even after waiting some time after the parts were removed. The lips of the wound were easily brought together; and, to retain them in contact, five stitches of the interrupted suture were employed, viz. one at the junction of the two incisions at the outside of the breast, three betwixt that and the sternum, and one betwixt the junction and the top of the incision in the axilla. Betwixt the ligatures the lips of the wound were covered with lint pressed out of bals. traumaticum; and the axilla and breast with graduated compresses, wet with a saturnine solution, and sustained by a bandage fixed with tapes on the opposite side: that part of the bandage covering the affected side was composed of linen, through which the saturnine solution was afterwards frequently soaked; the remainder was of flannel.

For three or four days after the operation she had a quick pulse, but suffered chiefly from lowness, having little or no symptomatic fever, except for a few hours in the afternoon of the 18th, after a little irregularity in diet. An
opiate

opiate was given every evening till the 19th, not to ease pain, but to calm an agitation of spirits; and, after the first two days, a moderate allowance of wine, a saline cordial mixture, and a cordial joined with the opiate, suited her better than the low diet she was put upon at the time of the operation. Except in the afternoon of the 18th, as just mentioned, she suffered very little pain, and that chiefly in the axilla, when the arm was accidentally moved or not properly supported, or when the compresses were not kept cool by frequently applying the saturnine solution.

On the 17th there was a very slight redness and swelling, without tension, just above the middle of the wound at the breast.

On the 19th, observing a little discharge, the lint, after being first softened with vinous spirit, was removed; the lips of the wound were found very little distant from each other in any part; in most places in contact; anteriorly corresponding to that part where the principal tumour had been removed: and where the redness and swelling were observed, two or three tea-spoonfuls of thin pus were discharged through a chasm of half an inch in length, and the matter being confined, one of the ligatures was removed and
another

another slackened; the pus in other parts was thick, and barely sufficient to moisten the lint. The wound was dressed with lint moistened with bals. copaivi, and the compresses with the saturnine solution were continued. She sat up an hour this day.

On the 20th, except the part just mentioned, and a small opening at the axilla, by which a little pus was pressed out, the wound was united. All the ligatures were removed, by none of which was the skin cut; a sufficient proof of there having been no tension. The saturnine application was not required to be so frequently renewed. The Peruvian bark was now given, and continued for ten days.

On the 21st she sat up several hours, and even walked down stairs.

On the 23d, the matter lodging under the lower lip of the wound anteriorly, a counter-opening was made about an inch below the wound with the point of an abscess lancet, and a suitable cotton seton introduced: the discharge was so much lessened by the 28th as to render its longer continuance unnecessary.

On the 24th the saturnine solution was discontinued. A large fontanel was opened in the thigh.

On

On the 25th, from the axilla, where remained of the wound about an inch and a half in length and one tenth of an inch in breadth disunited or unhealed, was a considerable discharge of lymph, which was suppressed by the usual applications in similar cases; and in a few days the wound was quite cicatrized. Before this took place some pimples appeared on the neighbouring parts, which occasioned a slight discharge, excoriation, and itching, and which continued for some time, so as to require some attention and dressing; but this was so trivial a circumstance, that it would have been unnecessary to have mentioned it, were it not for the propriety of stating the case accurately. Considered as a mark of acrimony, small doses of calomel were given for some nights, interposing now and then a dose of Glauber's salt.

By the latter end of October she was so free from pimples as not to require any application; she had recovered her general strength; daily gained strength and freedom in the motion of the arm, which was at first considerably confined by a tightness at the anterior armpit, and was free from a forenness she had felt on the inside of the biceps muscle before the operation was performed. The mark left by the wound was a
mere

mere line, with a small depression where the principal tumour had lain.

She was advised to be attentive to maintain a discharge from the issue; to confine herself to as mild a diet as possible; and once or twice a year to take the calomel for a week or two as before. These rules, with an occasional blood-letting or two, were pretty well, though not strictly, observed.

She never recovered the strength of the arm so perfectly as before the operation, yet sufficiently to be often employed in occupations requiring considerable exertion. In the spring of the next year she was alarmed with pains about the original seat of the tumour, shoulder, and arm, with a stiffness and soreness in the axilla, and with languors, to which she had been before subject in hot weather: the pains seemed to her to be not in the soft parts, but in the bones. These symptoms went off in about a month. She had slighter returns of them for a few days, at times, about the autumn of the year 1785. She thought that they were brought on or increased by taking cold, by heat, or by much exertion in her employments. Sometimes she felt the pains shooting down to and going off by an increased discharge from the issue, and
observed

observed that now and then the discharge was very foetid for two or three days, without any neglect in dressing it.

Except these complaints, she enjoyed good general health, and there appeared no evident marks of a return of the disease till the latter end of the year 1786, when, besides the above symptoms, she began to suffer pains in other parts of the body, and two small indurations were discovered in the course of the cicatrix in the axilla, one of which was close to the arm, and a third more forwards and a little above the cicatrix : upon this last the skin moved freely ; but this was not the case with those in the axilla. The indurations in the axilla slowly increased, and her general pains, like rheumatism, also, so that before the close of the year there was no part of her body, except the head, but at times suffered ; the *right* arm was more affected than the *left*, and at the indurated parts she had now the same sensation of something alive, as formerly, at the breast. At this time the issue was in a great measure healed.

A seton was made in the side, about a hand's breadth below the cicatrix. For some weeks she took flores martiales, or cicuta ; a remedy similar to Du Mare's tincture was applied to

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the indurations; and an hemlock bath was used twice, a week. She did not appear to receive any benefit from these, except the bath, by which her general pains seemed to be abated; but her strength gradually decayed, she had frequent languors, now and then pain through the chest affecting respiration, once or twice colic pains, and at last difficulty in swallowing solid food, and pain of her stomach upon taking her pills or any thing solid; and some time after the disuse of the bath the pains of the limbs increased again so as to break her rest. During this state a large dark-coloured pustule broke out in the forehead, and continued in nearly the same state for some weeks before it died away; the discharge from the seton too turned the silk black, raised pimples, and excoriated the skin to a considerable distance.

Although the indurations in the axilla increased, they never ulcerated, nor acquired any considerable size; they occasioned little or no pain, and she once observed that the sensation of something alive was shifted from them to the seton: the smaller anterior induration did not increase, and the remainder of the cicatrix continued soft, smooth, and moveable. After this

this she took no other medicine than a laxative one, to obviate costiveness, which required it frequently.

On the 23d of April, 1787, when, from her feeble state, she appeared not able to survive many weeks, she fell backwards from the top of the stairs to the bottom, and received a contused wound on the posterior part of the left parietal bone, which bled freely, but not profusely, and another contusion on the anterior part of the right parietal, besides other slighter bruises.

A few hours after this accident her speech left her, she gradually sunk, and died about thirty hours from the time of the fall. Mr. Williams, Surgeon at Dursley, who visited her after the accident, informed me, that he observed no symptoms that could be attributed to mischief done to the head, and he was of opinion that the fall proved fatal to her only from her infirm state.

While living she had expressed a desire that I might open her after her death, which I accordingly did two days afterwards, in the presence of Mr. Williams, and Mr. Taylor, Surgeon at Wotton-Underedge. The appearances on dissection were as follows: Just above the small curvature of the stomach was an indurated gland, of

about the size of a large French bean. There were one or two similar but smaller ones in the mesentery; and a small cluster of still smaller ones in the mesocolon, on the left side. In the cellular substance covering the anterior surface of the left kidney were some small hard bodies, feeling like shot or roundish seeds under the finger. The abdominal viscera were found. In the thorax the lungs were very found, (except a small stony substance or two, like shot, found near their surface) and had contracted only a slight adhesion at the upper part of the left lobe. The heart was small for the size of the body, and cut rather more tender than usual, without any marks of putrefaction. On its under side was here and there a white tendinous-like appearance, running in lines, flat and narrow, and somewhat in the direction of the vessels, but straighter, probably the beginning of ossification. On one side of the aorta, a little below the curvature, was a pretty broad ossification: at the curvature were four trunks, the unusual one smaller than those of the left carotid and subclavian, betwixt which it sprung. The induration at the axilla did not extend into the chest or towards the clavicle, no traces of it being found there. Under the scalp at both contusions was a considerable

considerable ecchymosis ; but no fracture, nor any extravasation or appearance within the scull which could be considered as morbid, there being only a very small quantity of water in the ventricles and on the anterior part of the beginning of the medulla spinalis.

R E M A R K S.

That the tumour in the breast of our patient was cancerous cannot be doubted ; that by the removal of it she enjoyed life three years longer than probably she would otherwise have done may perhaps be allowed ; and it may be granted likewise that the symptoms of a cancerous diathesis, independent of the small indurations in the axilla, wore out her strength and proved fatal ; for the fall cannot be considered as accessory to her death, any otherwise than as having somewhat shortened the duration of a frame too weak to bear its shock.

The number of dissections of cancerous cases hitherto given to the world is comparatively small ; and in all that I have read, where the progress of the disease, in an external part, did not seem sufficient to occasion death, some viscus, gland, or other part, situated internally, was found affected with the disease. I confess my expectation

was

was to have met with some such appearance in this patient ; but her death cannot be ascribed to any such cause. The small glandular swellings in the abdomen were probably not at all painful in themselves, and certainly could not occasion any injurious pressure on other parts. This, therefore, may be considered as a proof of the opinion, “ that cancerous acrimony may pervade
 “ certain series of vessels, and create pains,
 “ without seizing upon any part with such vio-
 “ lence as to destroy its functions *.”

The success attending some late attempts to procure an union of the wound by the first intention after amputation of the limbs †, and my having successfully proceeded upon this principle after the removal of one or two encysted tumours, induced me to extend the same practice to the above case ; but what principally determined me was the conduct of Mr. Wilmer ‡, in the first operation performed on one of his patients for the removal of a schirrus of the breast, where he approximated the sides of the

* Fothergill. Medical Observations and Inquiries, Vol. V. art. 14.

† Alanson's Practical Observations upon Amputation.

‡ Cases and Remarks in Surgery, Case 27.

wound

wound with slips of sticking plaster. Mr. Wilmer, indeed, seems to have apprehended, that this method contributed to a return of the disease in that patient ; but the event of the second operation, conducted in the opposite method, did not prove his fears to have been well founded ; and that they were groundless I was satisfied, by the different event of those cases of cancer of the lip which had, and of those which had not, been treated in the method of the hare-lip*. I thought I had improved Mr. Wilmer's method, not knowing at that time that the same plan had been pursued by any other practitioner of the present day ; but some months afterwards I learnt that Mr. Fearon† had treated two cases in a similar manner. In these, Mr. Fearon, as well as Mr. Wilmer, employed sticking plaster without suture ; and he says‡, that, in his latter practice, he never uses ligatures, finding the adhesive plaster fully sufficient : but I think with Mr. Bell§, that ligatures are preferable. It is true that the insertion of the ligatures gives

* Bell's Treatise on Ulcers, page 273.

† London Medical Journal, Vol. IV. page 406.

‡ Treatise on Cancers, Ed. 2, page 81.

§ System of Surgery, Vol. II. page 456.

some additional pain ; but this would be very little if the straight needle was used, which might here be done very conveniently *, passing it through each lip of the wound, from within outwards, as advised by Mr. Bell †.

It deserves to be considered, however, when we proceed upon this plan, whether or not the lips of the wound should be brought into contact in every part by suture or otherwise. Mr. Fearon observes ‡, that suppurations have happened in consequence of inattention to exclude all the air under the teguments, by bringing them carefully into contact with the subjacent parts. That the confinement of air will have this effect there can be no doubt ; and I apprehend that this may sometimes depend upon another cir-

* From the difficulty or impossibility of using a straight needle in some situations, the crooked one was undoubtedly contrived ; and from the usefulness of the latter in these, surgeons seem to have adopted it in other situations, where the straight one (which they have confined almost to the sole purpose of sewing up a dead body) might be more conveniently used. In July, 1787, a case of a very extensive, irregular wound of the face occurred, in which I had occasion to apply seven sutures ; all of which, except one at the internal canthus of the eye, were made with the straight needle.

† System of Surgery, Vol. I. chap. 1. sect. 2.

‡ Treatise on Cancers, page 81.

cumstance,

cumstance, to be presently mentioned. Although a more speedy union could hardly take place, than in our patient, throughout the greatest extent of the wound, yet a small suppuration happened in about one tenth of it. Had one of the stitches been omitted, the necessity of making a puncture, though a small inconvenience, might not have occurred ; much, therefore, will depend on the judgment of the surgeon, at the time of operating, to determine to what extent it will be proper to proceed on the uniting plan. It is probable that it may more fully take place in cases where the tumour is extensive, and free from tuberos projections on its posterior part, so as to make a pretty equal pressure on the pectoral muscle, than in those where the tumour is small, or large, and having any such projection, by its pressure may have produced partial wasting and impression in the muscle ; in which case the lips of the wound, being brought into contact, will be, in a manner, suspended over the muscle. This circumstance, of impressions in the pectoral muscle, is little noticed by writers * ; nor is it material, if the wound be treated in

* M. Faget observed it in a case where he amputated the breast :—“ Elle avoit quelques éminences en forme de mamme-

in the old way, by filling it with lint, &c.; but if treated in the contrary method, it is a matter of importance. In such parts it may be best not to bring the lips of the wound into contact, but to apply suitable compresses only, or make a small longitudinal incision of the inferior portion of the teguments, as advised by Mr. Bell *. In short, it must be remembered, that we are to procure, if possible, an union of the teguments with the subjacent parts, and also of the lips of the wound with each other; that cases may be so favourably circumstanced as that both intentions may be accomplished at the same time; but if otherwise, that the latter must give place to the former.

I have been the more particular in pointing out the small suppuration in my patient, from an apprehension that similar circumstances in other cases of the same kind may contribute to a disuse of this method of operating in favour of the old practice, it being well known that prac-

“ lons qui s'enfonçoient un peu dans le muscle pectoral, & que
 “ j'aurois peut-être coupées, si je n'avois pas eu soin de tirer
 “ la tumeur vers moi & de la detacher presque entierement
 “ avec les doigts.” *Memoires de l'Academie de Chirurgie,*
Tom. I. p. 683.

* *System of Surgery, Vol. II. page 444.*

titioners

titioners are too apt to discard modes of treatment which do not equal their most sanguine expectations in every point ; and I am the more inclined to this opinion, as I find that the same plan has been used, in a greater or less degree, by some of our forefathers, and which perhaps, from some such cause, might not have been generally adopted.

The approximating or uniting the sides of wounds, practised by the ancients * and some of the moderns, after the extirpation of encysted and other tumours in various parts of the body, have been used by a few of the latter after that of the schirrus of the breast and testis. After the amputation of the breast, Wiseman † employed a cross stitch ; Purmannus ‡ slips of sticking plaster ; and Mr. Hill § used sutures in one of his patients. Garengéot was a warm advocate for this method : he urged it by the same arguments which have been lately used, drawn from the supposition of the disease being originally a local one, and from the greater pro-

* See Celsus de Medicina, Lib. 7, cap. 6.

† Chirurgical Treatises, Book 1, chap. 21, obs. 9.

‡ Chirurgia Curiosa, Eng. Translation, Book 2, chap. 3.

§ Cases in Surgery, page 16.

bability of its again attacking the wound treated on the suppurative plan ; in order to promote a ready union of the wound, he advised the incision of the teguments to be made in a suitable manner, and that sutures, if the lips of the wound can be brought into contact, or, when that cannot be accomplished, sticking plaster should be employed *. He speaks of its being very successfully practised by able surgeons ; yet we do not find it mentioned by his contemporaries

* “ Il ne faut pas s'embarrasser si la peau est coupée exactement *en rond* ; c'est même une faute que cette grande exactitude ; car si on veut une plus prompte réunion, c'est de faire une plaie *en long* afin d'avoir plus de facilité à approcher les bords de la peau, pour en faire la suture si la chose est possible ; ce que d'habiles chirurgiens ont fait avec un très grand succès, même à des cancers tous ulcérés.

“ Si l'on fait cette opération dans un endroit où la peau ne prete pas beaucoup, & que la perte de substance soit si considérable, qu'on ne puisse pas approcher les deux lèvres de la plaie l'une contre l'autre, pour en faire la suture ; il est d'un chirurgien qui tend à guérir promptement, de se servir de l'emplâtre d'*André de la Croix* ; car si on ne peut pas faire tout le bien qu'on souhaite, qui est de réunir exactement la division, il faut du moins en approcher le plus qu'il est possible.

“ On

aries and countrymen, Le Dran and Petit *. De la Faye †, indeed, in his remarks, orders the sides of the wound to be brought together as nearly as possible, and compresses to be applied so as to retain them in that situation ; but his incision, as well as that of Wiseman and Purmannus, being circular, the lips of the

“ On voit, par notre méthode de traiter toutes les tumeurs
 “ enkistées §, que nous sommes fort éloignés du sentiment de
 “ ceux, qui pour purifier la masse du sang, & prévenir par
 “ conséquent la récédive, entretiennent une longue suppura-
 “ tion, pour servir, à ce qu'ils disent, d'égout aux serosités
 “ mauvaises dont les chairs & les graisses sont infiltrées : il
 “ seroit même à souhaiter de pouvoir réunir la plaie en vingt-
 “ quatre heures, car il y a lieu de croire que la récédive de ces
 “ maladies ne vient qu'en conséquence des longues suppura-
 “ tions, ou une partie du pus est prise par les vaisseaux san-
 “ guins, & portée dans la masse, pendant que l'autre sort à
 “ tous les pansemens qui sont trop frequens, & dans lesquels
 “ on se pique trop d'exaëtitude.” *Traité des Operations de
 Chirurgie*, 2d. Edit. Tom. II. p. 421.

* Heister (*General System of Surgery*, English Translation, Part II. chap. 107.) mentions it as proposed by Petit ; but nothing is said of it by the latter in his posthumous work, *Traité des Maladies Chirurgicales*, although he treated encysted tumours in this way.

† *Cours d'Operations de Chirurgie* par M. Dionis, 4th Edit. p. 465.

§ He reckons cancers among the encysted tumours.

wound

wound could not be brought into contact. Heister * mentions his having followed Garengeot's method in one instance, and that the wound was soon healed ; but the disease returning soon afterwards, he seems to have been discouraged from using it again.

It appears to have been the general method with the ancients †, after performing any operation in the groin or scrotum, to apply the fibula or future to the wound. Bonetus ‡ relates, from Bartholine, an instance of sarcocele removed by castration ; after which the surgeon sewed up the wound : and this is not mentioned as an unusual practice. Purmannus § directs, after removing the carnos substance || in a sarcocele, to sew up the wound with two or three stitches ; which he did likewise in a case of hydrocele, after having made an incision. Sharpe ¶ says, that it will greatly facilitate the cure of the wound to pass one or more ligatures. Although

* General System of Surgery, Part II. chap. 107.

† Celsus de Med. Lib. 7, cap. 19.

‡ Sepulchret. Anatom. Lib. 3, sect. 29, obs. 22, §. 2.

§ Book 2, chap. 14.

|| He confounds the schirrous testis with other diseases of the part, as did other authors of that time.

¶ Treatise on Operations, Chap. 10. Critical Inquiry, Chap. 3.

Mr. Sharpe's treatises have been held as a standard by most practitioners in England for near half a century, I believe that his directions in this respect have been rarely followed: Mr. Fearon has the merit of bringing the uniting plan in this instance, as well as in that of the scirrhus breast, into more general use; and it is pleasing to see it now adopted after other surgical operations.

There are some other parts of the treatment which I think deserve notice. In my patient it is seen that lint moistened with bals. traumaticum was applied over the edges of the wound. This application I have for a long time used to wounds that were to be united by the first intention, as did our forefathers, and do the common people; but it seems not to be in general use with surgeons. It excludes air, impedes suppuration, by drying and adhering to the skin becomes assistant to the ligatures, and is not loosened by any watery application coming into contact with it that may be thought proper to be used *. My patient found great relief from the frequent

* I think the method of using it is improved by inspissating it to the consistence of honey, and spreading it pretty thick upon fine old linen or silk: it may be permitted to dry,
cut

frequent renewal of the saturnine solution, as did a patient whose case is related by Mr. Wilmer*, although the latter did not in that instance proceed upon the uniting plan. We both applied it cold, being in summer; but under some circumstances, perhaps, it may be better to use it lukewarm. By thus keeping the parts cool, both hæmorrhage and inflammation will be more effectually prevented.

A bandage, made on the same principle as the napkin and scapulary, is much more commodious than the roller †. Flannel is certainly preferable to linen; but if the compresses are to be kept wet, it is best that that part of the bandage which covers them be of linen, that the liquid may be soaked through it without disturbing the bandage.

cut into a proper form at the time of use, and rendered adhesive by moistening its surface with vinous spirit, as we do court plaster with water. In this way, at least, the smarting, which the application of it in its liquid state is apt to excite, may be prevented.

* Case 26.

† Mr. Hill's bandage for the thorax (Cases in Surgery, page 222) is a good contrivance. I have for near twenty years used a similar one, with this difference, that it has loops on one side, and on the other double strings of tape, by which means it is more easily tightened or slackened occasionally.

The remarks here made on the chirurgical treatment are submitted with deference to those gentlemen whose situation obliges them to a frequent performance of these and similar operations. If we should pride ourselves in thinking that we have been making great improvements, by deviating from the general practice of our more immediate predecessors, we may be humbled by the reflection, that we have done little more than laid aside some bad practices imbibed from them, and returned to the plan made use of by the ancients; not in cancers, indeed, for they considered them to be so liable to return, that Celsus has not left us any directions for removing them, except the farcocele, which he does not reckon with the carcinoma; but in wounds in general, as well as in those occasioned by the removal of encysted tumours, if circumstanced so as to admit of union or approximation, they applied the suture or fibula, some agglutinative medicine, and a sponge squeezed out of vinegar, wine, or cold water, which was carefully renewed, so as not to suffer the part to become dry*.

* Celsus de Med. Lib. 5, cap. 26. Lib. 7, cap. 6.

Permit me to add a few other remarks which have occurred on considering this subject. The bad success which the late Professor Monro * met with in the extirpation of cancers is well known, and appears to be very satisfactorily accounted for †; but it is rather surprising to see Sharpe and Le Dran mentioned ‡ as discouraging surgeons from extirpating cancers without distinction. Sharpe, speaking of the scirrhous and cancerous breast, allows that the operation is precarious, from the great disposition in the constitution to form a new cancer; but mentions some circumstances under which he thought it had best succeeded, and in which he not only allowed but even encouraged the operation §. Le Dran took great pains to ascertain the cases in which success

* Medical Essays of Edinburgh

† Bell. Treatise on Ulcers, Part II. sect. 8, §. 2.

‡ Hill's Cases, page 2. Fearon's Treatise, page 3.

§ " There are some surgeons so disheartened by the ill success of this operation, that they decry it in every case, and even recommend certain death to their patients rather than a trial, upon the supposition it never relieves; but the instances where life and health have been preserved by it are sufficiently numerous to warrant the recommendation of it." Treatise on Operations, Chap. 26.

might be expected from extirpation ; for that he indiscriminately condemned it cannot be inferred from what he has said in his Treatise of Operations ; and whoever will peruse what he afterwards published in another work *, will find sufficient encouragement to operate.

On the other hand, from Mr. Hill † having not a seventh part, who were not cured, and who suffered relapses after the healing of the wound, out of eighty-eight patients on whom he operated, some gentlemen ‡ seem to infer, that success may be expected to attend the extirpation of cancers, wherever situated, without distinction ; a conclusion which the premises do

* *Memoire avec un précis de plusieurs observations sur le cancer. Vide Mémoires de l'Académie de Chirurgie, Tome III.*—In the second section of that Essay, after relating some cases of cancer of the breast in which relapses happened after the operation, he says, “ Mais faut-il pour
“ cela, refuser tout secours, & ne pas essayer de guérir par
“ une operation qui a si souvent réussi, lorsqu'il n'y a que
“ de la probabilité pour la récidive ? Il faudroit avoir une
“ certitude physique de l'impossibilité de la réussite ; & c'est
“ là le seul cas où on ne doit pas faire l'operation.”

† Cases in Surgery.

‡ Bell. *Treatise on Ulcers, Part II. sect. 8.* — Duncan. *Medical Cases, page 111.*

by no means justify, and which, I believe, would hardly have been drawn by Mr. Hill himself: for if we inquire farther into the matter, we find that of the whole number there are only five instances of cancer of the breast, two of which were not cured, and another patient suffered or was threatened with a relapse; so that the successful cases in the breast were only two in five: whereas the other eighty-three, with very few exceptions, were cancers seated chiefly in the skin, and especially the lip, and in these the success rises in proportion as it is reduced in those of the breast, being more than seven-eighths of the whole.

It would be a curious, if not a useful inquiry, to ascertain the proportional success attending the extirpation of cancers in different parts of the body; but it may be doubted whether the practice of any individual, however extensive, is sufficient for this purpose; therefore it would be best done by the joint observations of many. From the histories of cases already published, not given in a regular series, an absolute conclusion cannot be drawn, more especially as writers have been too fond of relating their successful cases only, or of publishing them before a sufficient period has elapsed after the operation:

ration : but perhaps we shall make some approaches towards the truth by examining how they stand in this view, or what is the proportion of successful cases to those which either entirely failed, or in which relapses happened sooner or later after the healing of the wound.

Of the cases which I have met with, being upwards of two hundred, and taken as they occurred, without selection, I observe, that in cancers affecting the skin chiefly, (of which there are four in the lip or other parts of the face to one in all the other parts of the body) success has been procured in about four-fifths. In the eye, the successful cases are more than one half: in the mouth, about two-thirds: in the breast, they hardly exceed one half: in the testis, about four-sevenths: in the penis, they equal or exceed those of the skin: in the limbs, if not confined to the teguments, not more than one-third.

These differences are surely too striking to be attributed to accident, and should, therefore, influence the conduct of the surgeon. In cancers of the skin, the above-mentioned proportion does not rise so high as in Mr. Hill's cases, which may be attributed partly to the disease being formerly suffered to proceed to a greater length

length before removal than latterly, and partly to the better method of treating the wound used of late years than formerly. M. le Dran's conclusions * on this head will appear just; and they are now farther confirmed by the success attending the extirpation of the cancer of the scrotum †, and of a species of cutaneous cancer prevalent in another part of the world ‡. Cancers of the penis seem to be as local as those of the face, or other external parts. But although we may allow that the cutaneous cancer is for the most part local, we cannot conclude the same with regard to that of the breast, testis, and other parts seated below the skin: that of the testis is probably oftener local than that of the breast; of which latter the small successful proportion from extirpation must be referred to the sex and time of life in which it usually makes its appearance.

Practitioners, for the most part, recommend early extirpation; which advice is undoubtedly good with regard to schirri and cancers in gene-

* *Memoires de l'Academie de Chirurgie*, Tome III.

† Pott. *Chirurgical Observations relative to the Cataract, Polypus of the Nose, Cancer of the Scrotum, &c.*

‡ Moseley. *Treatise on Tropical Diseases.*

ral : but M. le Dran *, from the event of some cases, concluded that the operation is improper, in those occasioned by the cessation of the menses, until many years are elapsed, and while the tumour increases without pain ; judging that in such nature is making a critical deposit, and that if before it be compleated she is interrupted a fresh one will be made. Although it is now thirty years since this remark was given to the world, I do not know that any regard has been paid to it : but certainly, from the known accuracy and solid judgment of M. le Dran, and the facts adduced, it deserves attention ; and it would be right, by future observations, to determine whether it be well founded or not. Was it of such patients that Mr. Sharpe † said, “ when a schirrus has admitted of a long delay
 “ before the operation, the patient seems to
 “ have a better prospect of cure without dan-
 “ ger of a relapse, than when it has increased
 “ very fast and with acute pain ?” And does not this again agree with what Le Dran has said in another part of the Memoir ‡ just now re-

* Mem. de l'Acad. de Chir. Tome III.

† Treatise of Operations, Chap. 26.

‡ Sect. 2, p. 32.

ferred to, and with what has been since observed by others*, and by Albucasis† long before?

Stroud-Water,

November 25, 1788.

III. *A Case of Hernia. Communicated in a Letter to Dr. Simmons, F. R. S. by Mr. Thomas Clowes, Member of the Corporation of Surgeons of London, and Surgeon at Wingham, in Kent.*

ON Wednesday, the 23d of July last, I was desired to visit Robert Gifford, a labouring man, sixty-three years old, at Ickham, a village near this place. Upon inquiring into his complaints, I found he had, for several years, been troubled with an inguinal rupture on the right side, but which had never descended lower than the groin, and, till now, had always been reduced, without difficulty, when he lay upon a bed.

* Hill's Cases in Surgery, p. 21. — Justamond. Account of the Methods pursued in the Treatment of cancerous Disorders, &c., p. 132. — Kirkland. Thoughts on Amputation, p. 52. — Fearon. Treatise on Cancers, Case 8.

† Freind's History of Physic, Vol. II. p. 150.

The

The tumour in the groin was of about the size of an hen's egg, and, from the violence he had used in his endeavours to reduce it, was become so tender, that he could scarcely suffer me to touch it. As he had been several hours in this state, and without any evacuation by stool, I directed (after bleeding him) a purgative mixture and a clyster to be administered. At the end of six hours, when I visited him again, I found him much relieved. He had had several stools, and the tumour was somewhat diminished.

On Saturday the 26th, being informed that he was again costive, I ordered the purgative medicine to be repeated, and the day following, when I visited him, found it had given him as much relief as before; but as the tumour was still irreducible, and he complained of pain when he walked, I supposed an adhesion might be taking place.

I saw him twice in the following week as I passed by his house, and found him each time walking about, and complaining of pain only when he used too much exercise. In this state, however, he did not long continue; for on Tuesday the 5th of August I was called to him in great haste, and was informed that he had

been in violent pain during the whole of the preceding night. On examining the tumour in the groin, I found the integuments were on the point of breaking, which they did before the next morning. The opening was about the size of a crown piece; the hernial sac and omentum protruded at the wound; the intestine was ruptured, and the fæces were discharged at the opening. On removing the omentum, I discovered that the opening in the gut was longitudinal, and at its anterior part only.

Almost the whole of the fæces continued to be discharged at the wound for a fortnight, so that I feared lest the intestine should become so much diseased as to be totally divided; in which case this part must, of course, have remained as the anus ever after. I therefore desired a neighbouring Surgeon* of eminence might be consulted. He approved of the plan of treatment I was pursuing, and agreed with me in opinion that no operation could have been undertaken with propriety in any stage of the disease.

Clysters were administered daily, and sometimes a small quantity of fæces came way with

* Mr. Lofie, of Canterbury.

them.

them. The wound was dressed as often as circumstances required, and the parts were well fomented. The patient thought that, at times, wind passed by the anus, as it did frequently at the wound.

About the 20th of August the fæces began to take their natural course more freely, and in another week from that time the healing of the wound was so far completed as to prevent any farther discharge that way. At the beginning of September he went out to pick hops, and followed that employment upwards of a month without any inconvenience. The wound has now been entirely healed several weeks, and he follows his former occupation of thrashing, and is as well as before his late illness. During the cure he took a few ounces of Peruvian bark in decoction.

This case, so far as relates to a small part of the intestine being engaged, resembles one related by the late ingenious Mr. Else in the fourth volume of the Medical Observations and Inquiries. In that case a fatal strangulation ensued, though the whole circumference of the gut was not enclosed in the stricture; and in my patient, if the whole of the intestine had been engaged, either a similar event or a total

separation of the gut must have been the consequence.

Wingham,

December 7, 1788.

IV. *A Case of Tæniæ Hydatigenæ, or Hydatids, successfully treated by the Use of Mercury. Communicated in a Letter to Dr. Simmons, F. R. S. by James Lind, M. D. F. R. S. Physician at Windsor, Fellow of the Royal College of Physicians and of the Royal Society of Edinburgh.*

ABOUT the end of October, 1786, I was sent for to a married lady, about thirty years of age, who had been in a bad state of health for some time, and then had a painful swelling at the pit of the stomach, and region of the liver. The disorder had the appearance of hepatitis, and as if the liver were speedily coming to suppuration: I therefore immediately began to give her quicksilver divided with mucilage of gum arabic, and made into pills, and to rub in mercurial ointment on the part affected,

fect^d, in order to abate the inflammation and prevent suppuration *.

In about ten days the mercury began to affect her mouth, and at the same time she voided an incredible quantity of the *tæniæ hydatigenæ*, or hydatides †, by stool and by vomiting. Her attendants reckoned she passed to the number of a thousand; there being as many as filled two large chamber pots. They were from the size of a small pea to an inch and a half in diameter, and agreed exactly with the description and figure of the *lumbrices hydropici*, given by Dr. Tyson in the Philosophical Transactions, No. 193. Many of these *tæniæ hydatigenæ* were deeply tinged with bile, some of which was also mixed with the gelatinous lymph with which they were filled, which shewed that they were also inhabitants of the biliary ducts as well

* *Vide* London Medical Journal, Vol. VIII. page 43.

† The *tænia hydatigena*, or hydatid, consists of a double pellucid vesicle: the inner bag is of the shape of a small bladder, the neck more opaque than the rest of it, and is formed of a number of muscular rings, with a small orifice at the extremity. This vermicular part is endued with motion and other animal powers. The outer bag is but slightly attached to the inner one. The whole appears like a small transparent bladder, which is about two thirds filled with lymph or serum.

as of the stomach and intestines, and that probably the liver also contained its share of them : nor is it to be doubted but that they were the cause of the present malady in the liver, of the frequent pains in the stomach, and of the indigestion, with which the patient had been afflicted for above two years, during which period she had, at intervals of about six months, passed some of these animals by stool. It seemed more than probable that the mercury, which I then gave her with a view to prevent the inflammation and suppuration of the liver, had rendered her juices poisonous to the *tæniæ hydatigenæ*, and thus destroyed them.

Notwithstanding the destruction of the *tæniæ*, the abscess was too far advanced to be dispersed by the mercury, so that in a short time it came to maturity, and pointed outwards. It was then agreed that it should be opened ; but in the night preceding the day appointed for the operation it burst of itself near the pit of the stomach, and discharged a considerable quantity of foetid, purulent matter at a small orifice of about a quarter of an inch in diameter, which she could not afterwards be prevailed upon to permit her surgeon to enlarge.

The

The discharge continued for about two months, gradually decreasing in quantity, and at last a gall-stone of about the size and shape of a French bean passed the orifice; after which the wound soon healed up, and in a few months after the patient perfectly recovered her health and strength, which she still continues to enjoy.

As most of the encysted dropsies which appear in different parts of the human body, besides a variety of other complaints, proceed from such collections of the *tæniæ hydatigenæ*. I hope the above case will prove acceptable to the readers of the London Medical Journal, as it may serve to point out a method of removing such disorders.

Windsor,

January 1, 1789.

V. A2

V. *An Account of the successful Application of the Trepan in a Disease of the Tibia.* By M. Verguin, Surgeon Major of the Naval Hospital and Inspector of the Royal College of Surgery at Toulon. Vide *Journal de Medecine Militaire*, Tome VII. . 8vo. Paris, 1788.

THE subject of this paper was a galley slave at Toulon, aged twenty-six years, who was brought to the naval hospital, in December, 1787, for the cure of a wound he had received, by the fall of a piece of timber, on his right leg.

The integuments of the anterior and middle part of the leg were much torn; and he complained of violent lancinating pain within the tibia, although no injury of the bone was perceptible externally.

It appeared, on farther inquiry, that about six years before this the patient had been wounded by a musket ball in the calf of this leg; that three years after he had received a violent blow on the middle of the same leg, and that the wound occasioned by this second accident had not only been a long time before it healed, but had repeatedly broke out again, and that
from

from that period he had been subject to pain, more or less acute, in the interior part of the tibia.

When he came to the hospital the limb was considerably swelled, but the tension, under proper treatment, gradually subsided : the pain, however, within the tibia still continued, and the wound possessed an extraordinary degree of sensibility.

Different topical applications, as well as internal remedies, were had recourse to by our author during the space of four months, but without success. The wound was ill conditioned, and the painful affection of the tibia was not diminished.

At this period, reflecting on all the circumstances of the case, he determined to make an opening into the middle part of the tibia, in the manner recommended by some writers in cases of *spina ventosa*. He accordingly employed the trepan for this purpose. The piece of bone removed by the operation was very compact and of extraordinary thickness. Within the cavity of the bone at this part he found a small quantity of a reddish fluid, surrounding three small detached portions of bone which he extracted. One of these portions, he

observes, was of the size of a large lentile seed, and of an angular shape; and the two others were irregularly shaped, and somewhat larger.

Within half an hour after the operation the pain with which the patient had been so long afflicted ceased. Suitable dressings were applied to the wound; care was taken to regulate the health of the patient; and on the twenty-fourth day after the operation an exfoliation from the opening made in the bone by the trepan came away, and the cavity was soon after filled with a substance, which, in a short time, became as firm as the rest of the bone.

The operation was performed on the 30th of April; on the 13th of July the wound was healed; and the patient was discharged from the hospital the month following in perfect health.

VI. *A remarkable Case of numerous Births; with Observations.* By Maxwell Garthshore, M. D. F. R. S. and A. S. in a Letter to Sir Joseph Banks, Bart. P. R. S. Vide *Philosophical Transactions of the Royal Society of London*, Vol. LXXVII. for the Year 1787. Part II. 4to. London, 1787.

THE account of this extraordinary case is furnished by Mr. John Hull, Surgeon at Blackburn, in Lancashire. The subject of it was a poor woman named Margaret Waddington, aged twenty-one years, of Lower Darwin, near Blackburn. She had formerly been delivered of one child at the full term of pregnancy, and conceived a second time about the beginning of December, 1785. At the end of the third month of this second pregnancy she thought herself quite as large as she had formerly been in the ninth, and she had for some time been much troubled with nausea, vomiting, and pain of her loins, to which was now added a distressing shortness of breath. Towards the middle of April, 1786, all these complaints were much increased; she had much tension and pain over the abdomen; her vomiting was incessant, and

she now could not make water but with the utmost difficulty. On the 24th of April, at which time she was supposed to have arrived at the twentieth week of pregnancy, she was seized with labour pains. The next day Mr. Hull was sent for, and she was soon delivered of a small, dead fœtus. The pains continuing, this was soon followed by a second: to this very soon succeeded a third, larger than the first, which was alive: after these a fourth followed, that was very putrid; and, lastly, a fifth, larger than any of the former, and alive. These five children were all females; two of them, as we have seen, were born alive; and the whole operation, Mr. Hull observes, was performed in the space of fifty minutes. Each child, we are told, presented naturally, was preceded by a separate burst of water, and was delivered by the natural pains only. The placenta was uncommonly large, and not divided into distinct placentulæ, but consisted of one uniform cake. Each funis was contained in a separate cell, within which each child had been lodged; and, Mr. Hull observes, it was easy to perceive, by the state of the funis, and that part of the placenta to which it adhered, in which sex the

dead,

dead, and in which the living children had been contained.

The two living children having survived their birth but a short time, were preserved by Mr. Hull, together with the other three, in spirits *, and having weighed and measured them, he found their proportions to be as follows in avoirdupois weight, inches and parts :

	Oz.	Dr.	Inches.
The 1st born dead	6	12	Length 9
The 2d ——— putrid	4	6	———— 8 $\frac{1}{4}$
The 3d ——— alive	8	12	———— 9 $\frac{1}{8}$
The 4th ——— putrid	6	12	———— 9 $\frac{1}{8}$
The 5th ——— alive	9	—	———— 9 $\frac{1}{8}$

The mother recovered without any accident. Mr. Hull concludes his account with observing that the husband of this poor woman had been in an infirm state of health for three years past, and at the time she was delivered laboured under a confirmed phthisis.

Dr. Garthshore, in his observations on numerous births, annexed to Mr. Hull's paper, has brought together a great number of curious facts relative to this subject.

* They are now deposited in the museum of Mr. John Hunter.

He states, that, at the British Lying-in Hospital, where 18,300 women have been delivered, the proportion of twins has been only once in 91 births; that, in the Westminster General Dispensary, of 1897 women delivered, the proportion of twins has been once in 80 births; but that in the Dublin Lying-in Hospital, where upwards of 21,000 women have been delivered, the proportion of twins has been once in 62 births. The average of these different numbers will be found to be about once in 78 births.

Dr. Garthshore observes, that the calculations made in Germany from great numbers, in various situations, state twins as happening in a varied proportion from once every 65th to once every 70th time; but at Paris, as he learns from an accurate calculation made by M. Tennon, in 104,591 births, the proportion of twins has been only once in 91, which is only a small degree less than the calculation at the British Lying-in Hospital.

It would be easy, he observes, to add other calculations, all differing from the above and from one another; but these, he imagines, will be sufficient to show that nature observes no certain rule in this matter, and that even twins,

the most usual variation, is not a very common occurrence.

He remarks, that 'when we advance to triplets, or three born at once, we find, comparatively, very few instances in this or any other country: thus, he tells us, that, at the British Lying-in Hospital, not one such case has occurred; and that at the Westminster General Dispensary it has happened only once; but he finds that in the Dublin Lying-in Hospital, in 21,000 births, triplets have occurred thrice, or once in 7000 times.

The author himself, in a pretty extensive practice of more than thirty years in midwifery, has attended but one labour where three children were born, and is personally acquainted but with one lady who, at Dumfries, after bearing twins twice, was delivered of three children at once. It seems, however, that Dr. Hamilton, Professor of Midwifery at Edinburgh, has, in less than twenty-five years, seen triplets born there five or six times.

Mauriceau, who passed a long life in very extensive practice, at Paris, met with instances of three children at once only a few times, and heard of four at a birth, in that city, but once. One circumstance mentioned by this writer is
quoted

quoted by Dr. Garthshore, as it accords with one somewhat similar mentioned by Mr. Hull, viz. "That the husband of one of those women who bore three children was by trade a painter, and had been, for two years preceding this birth, paralytic over one half of his body, and yet had no reason to doubt the fidelity of his wife."

These facts, our author observes, as far as they are to be depended on, may shew us, that the capacity of procreation in the male may remain under very infirm health; and that we ought to judge with candour of such wives as are fruitful when living with very ailing husbands, and who produce healthy children in the eighth or even ninth month after their death, as we can never say determinately under what degree of disease the male is totally incapable of procreation, more especially as we are very certain that the female is not, when labouring under very desperate and certainly fatal diseases, provided the principal organs of generation be sound. Nay, in cases of pulmonary phthisis, the life of the female seems to be protracted by pregnancy; and he tells us he has attended a lady, who, after being pronounced irrecoverably hectic, lived long enough to be twice delivered

livered naturally of healthy children at the full time.

Our author next considers the occurrence of four born at once, which he finds to be so uncommon, that he thinks Haller's conjecture, rather than calculation, of its happening once in 20,000 births, very much under-rated, as it appears that once in 100,000 would be much nearer the truth. Of this, however, he observes, we have several well-authenticated cases which have happened in this island. In the year 1674 there was published, it seems, in London, a quarto pamphlet, entitled, " The fruitful
 " Wonder, or a strange Relation, from Kingston upon Thames, of a Woman who, on
 " Thursday and Friday, the fifth and sixth
 " Days of this Instant March, 1673-4, was delivered of four Children at one Birth, viz.
 " three Sons and one Daughter, all born alive,
 " lusty Children, and perfect in every Part,
 " which lived twenty-four Hours, and then
 " died all much about the same Time; with
 " several other Examples of numerous Births,
 " from credible Historians, with the physical
 " and astrological Reasons for the same. By
 " J. P. Student in Physic."

Dr. Plott, in his History of Staffordshire, p. 194, mentions Eleanor, the wife of Henry Diven, of Watlington, who was delivered of four children at a birth in the year 1675.

Sir Robert Sibbald, in his *Scotia Illustrata*, after mentioning a case of three born at once, adds, “Imo in variis regni locis repertæ sunt
“ mulieres quæ quatuor fœtus uno partu ediderunt;” but makes no mention of more.

From the Gentleman’s Magazine Dr. Garthshore has collected the following instances of four children at a birth :

“ Ann Boynton, of Hensbridge, in Somersetshire, was this day, June 1, 1736, delivered of three daughters and one son ; one
“ of the daughters died, the rest are likely to live. The mother has been married but four
“ years, and has had twice twins before, which completes the number of eight children at
“ three births.”

“ October 3, 1743, at Rate, in Berkshire, Joan Galloway was delivered of two boys
“ and two girls, three of whom were alive.”

“ In January, 1746, the wife of Plumer, a labouring man, at Mill-Wimley, near Hitchin, Hertfordshire, was delivered of three
“ living boys and one dead.”

“ August

“ August 22, 1746, the wife of Williams,
 “ of Coventry Street, Piccadilly, was delivered
 “ of two boys and two girls, all likely to
 “ live.”

“ June, 1752, a woman in the parish of
 “ Tillicultrie, near Stirling, in Scotland, was
 “ delivered of four children, which were all
 “ immediately baptised, and all died at the
 “ same time next morning.”

“ In September, 1757, a poor woman, of
 “ Burton Ferry, Glamorganshire, was deliver-
 “ ed of three boys and a girl.”

Dr. Hamilton, before mentioned, relates, that, not many years ago, a woman was delivered of four children, at Pennycuick, the seat of Sir John Clark, Bart. near Edinburgh, when she was advanced to the middle of her last month of pregnancy, and that some of these children lived two or three years. He farther says, that, five years ago, he attended a woman at Edinburgh, who, in the seventh month of her pregnancy, after a journey of thirty miles, was suddenly delivered of four children, all perfect and well grown for the time, of which one was born dead, and three alive; but those three died next day. He farther adds, that these are the only cases of quadruplets, or any larger

number, he had ever heard of, as born in Scotland, in his memory.

Though cases similar to the present, of five children born at once, are still much more uncommon; and though Haller's assertion of their not happening above once in a million of births, may, as our author thinks, be reckoned a very moderate calculation, yet, he observes, we are not altogether without some such instances in this country.

In the Gentleman's Magazine he has found, that on the 5th of October, 1736, a woman, at a milk cellar in the Strand, was delivered of three boys and two girls at a birth; and that in March, 1739, at Wells, in Somersetshire, a woman was delivered of four sons and a daughter, all alive, all christened, and all then seeming likely to live.

In the *Commercium Literarium Norimbergense*, for the year 1731, he has met with two similar cases; and he has been told by two foreign professors who were lately in London, that they had each of them heard of an instance of five children born at once. One of these instances is said to have happened near Paris, and the other in the neighbourhood of Ghent.

Dr. Garthshore very candidly observes, that
when

when we advance farther in our inquiries on this subject we get into the region of tradition and improbability ; and he has not thought it right to trouble a Society, whose professed objects are truth and science, with the numerous and wonderful relations which many grave and learned authors have recorded as facts they themselves believed. He has, therefore, contented himself with just mentioning the case of a lady, who is said, by Ambrose Paré, to have brought forth six children at a birth ; and another related by Borellus, in the second century of his observations, of a lady, who, in the year 1650, produced at one birth eight perfect children.

Our author has thought it unnecessary to pursue this inquiry farther ; but he observes that the present is the only case he has found where the children were all females ; that the males have in all the other cases been at least equal, and generally the most numerous ; that in many of them, at least a part was dead born ; and that most commonly the rest died in a short time. It is thence, he thinks, clear, that these numerous births are certainly unfavourable to population, as very few indeed of those children can be carried to near the full term of pregnancy, and fewer still to that degree of strength that
admits

admits of their being reared, where more than two are born at one time.

As a farther probable proof of the fruitless profusion and waste of the human race these numerous births must occasion, Dr. Garthshore refers to the very curious experiments and observations lately published by Mr. Hunter relative to the extirpation of the ovaria, which tend to show that a certain determined number of ova, capable of male impregnation, are originally formed in each ovarium ; which number, when exhausted, the female constitution has no power to renew.

From the united testimony of all the facts he has collected on this subject, our author thinks it is clear, that the females of the human species, though most commonly uniparous, are, in certain circumstances to us unknown, every now and then capable of very far exceeding their usual number ; and, he adds, that it does not appear that we can set any bounds to the powers of nature in that respect, or pretend, as some have done, with certainty to say, what may be the utmost limits of human fertility.

In an Appendix to the preceding account, with which we have been favoured since the publication of the volume of the Philosophical Transactions

Transactions now before us, Dr. Garthshore has collected some other instances of numerous births which we shall here briefly mention.

The first of these is a case of a poor woman in Ayliffe Street, London, who was married in September, 1786, being then in her twenty-eighth year. On the 9th of June (nine months and six days from the time of her marriage) she was delivered, in the evening, of a small living girl. No placenta followed, and she continued tolerably easy till the evening of June the 11th, when she again fell into labour, and was delivered, about twelve at night, fifty-two hours after the birth of the first, by the natural pains, of a second living girl, larger than the former, and a double placenta soon followed. She continued uneasy all that night; and on Tuesday the 12th, at eleven o'clock in the morning, (eleven hours after the last labour) she was delivered of what the midwife called a false conception. On Wednesday the 13th, at three o'clock in the afternoon, she was delivered, by natural pains, of a putrid female child, six inches in length; and on Thursday the 14th, at seven o'clock in the morning, she was delivered of a fourth child, of nearly the same size as the third. A double placenta, which seemed

to

to have belonged to these two last children, soon followed in a putrid state. The birth of these four children was soon followed by symptoms of puerperal fever; and Mr. Gilson, of White-chapel, being then called to the assistance of the patient, found her in the most dangerous situation; but before Mr. Gilson came both the placenta and the false conception were destroyed. The midwife described the latter as a large mass of solid flesh, covered with a thick skin, and measuring near ten inches in circumference, but in which, when it was cut through and examined, she could not find the smallest vestige of a fœtus. From this description Dr. Garthshore is at a loss to determine whether it was only a mere coagulation of blood, or the secundines of a fifth conception, in which the fœtus had died so early as to be totally dissolved, and so mixed with the coagulated mass as not to be discovered by the midwife.

The patient died on the 17th of June; but the two first born children are said to be healthy, and of the usual size of small twins. The eldest weighed, in her cloaths, four pounds and one quarter, and the youngest scarcely four pounds; both together barely the weight of a common full-grown fœtus.

Our

Our author next mentions an account given formerly in the *Journal des Scavans* by M. Seignette, Physician at Rochelle, of a woman of Saintonge, who was, at one birth, delivered of nine well-formed children, so far advanced that their sexes could be discovered; and he farther observes, that Bianchi, in his work *de Naturali in humano corpore vitiosa morbosaque Generatione*, asserts, that, in his time, the circumstance of three children at one birth had happened more than once; that in some of the districts of Piedmont there had been sometimes five at a birth; and that in the dutchy of Milan, a very little time before the year 1741, when his work was published, seven had been born at one time.

In the Harlem Courant for 1755 our author has found an account of a man who was presented to the Empress of Russia, and who was remarkable for being the father of seventy-two children by two wives. He likewise informs us that the daughter of Gerard Vanderguicht, Engraver to Sir Hans Sloane, confirmed lately to Dr. Combe, a fact he had often heard, that her mother, who is now alive, and in her eighty-sixth year, had borne thirty-two children

at one and thirty births, the last being twins, and that they all lived to be christened.

The last fact related by Dr. Garthshore is given on the authority of Mr. Kirwan, a very respectable philosopher, and Fellow of the Royal Society : it relates to a gentleman in Ireland, who was the youngest but one of forty sons, all produced in succession from three different wives, by one father, and who all arrived at the age of manhood *.

* The following epitaph, commemorating an instance of remarkable fecundity, is inserted by Mr. Pennant in his Journey to Snowdon :

“ Here lyeth the Body of Nicholas Hookes, of Conway,
 “ Gent. who was the 41st Child of his Father, William
 “ Hookes, Esq. by Alike his Wife, and the Father of
 “ twenty-seven Children, who died the 20th Day of March,
 “ 1637.” — EDITOR.

CATA-

CATALOGUE OF BOOKS.

1. **A**N Essay on the Recovery of the apparently Dead. By *Charles Kite*, Member of the Corporation of Surgeons in London, and Surgeon at Gravesend in Kent : Being the Essay to which the Humane Society's Medal was adjudged. To which is prefixed Dr. *Lettson's* Address on the Delivery of the Medal. 8vo. Dilly, London, 1788.

2. An Essay on the Rupture, called Hydrocele, explaining the Anatomy of the Parts affected ; with Objections to the Incision, Seton, &c., in which is communicated an improved Method of radically curing that Disorder with more Certainty and less Pain. By *Benjamin Humpage*, Surgeon, and Member of the Corporation of Surgeons in London. 8vo. Reynell, London, 1788.

3. The Works of *Thomas Sydenham*, M. D. on acute and chronic Diseases ; wherein their histories and modes of cure, as recited by him, are delivered with accuracy and perspicuity. To which are subjoined Notes, corrective and

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explanatory, from the most eminent medical Writers; adapting the whole to the present improved state of Physic, and shewing under what Classes, Order, and Genera, most of the complaints treated of are arranged by Nosologists: With a variety of Annotations. By *George Wallis*, M. D. 2 Vols. 8vo. *Robinsons*, London, 1788.

4. A Treatise on Diluents, and an Inquiry into the Diseases of the Fluids of the Human Body, to ascertain the Operation of Diluents upon them; with Dilution practically applied to particular Diseases: wherein the Efficacy of Mineral Waters is considered. To which are prefixed Observations on common Water, so far as it respects the Subject of Attenuants. By *Thomas Jameson*, Surgeon of His Majesty's Navy. 8vo. *Murray*, London, 1788.

5. Observations on the Rupture of the Gravid Uterus; with the Sequel to Mrs. Manning's Case. By *Andrew Douglas*, M. D. Member of the College of Physicians, London; Consulting Physician to the Lying-in Charity; and Physician to the Asylum for Female Orphans. 8vo. *Johnson*, London, 1789.

6. The Oeconomy of Health, or, A Medical Essay, containing new and familiar Instructions

tions for the Attainment of Health, Happiness, and Longevity ; in which the Nature of the human Mind is accurately investigated, and its Union and Connexion with the Body systematically explained. By *Andrew Harper*, late Surgeon to His Majesty's Garrison in the Bahama Islands. 8vo. *Stalker*, London, 1789.

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9. *Dissertatio Medica Inauguralis de Ictero*. Auctore *Nicolao Bindon*, Hiberno. 8vo. *Edinburgi*, 1788.

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10. Differtatio Medica Inauguralis de Dyſpepfia. Auctore *Gulielmo Jones Evans*, Hiberno. 8vo. Edin. 1788.

11. Differtatio Medica Inauguralis de Ophthalmia. Auctore *Joanne Eifon*, Scoto. 8vo. Edin. 1788.

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22. *Justi Arnemann*, D. in Academia Georgia Augusta Professoris Medicinæ publ. Commentatio de Aphthis, quæ ab ill. Reg. Societate Medic. Parisiensi 25 Aug. 1787, palmam alteram obtinuit. 8vo. Gottingæ, 1787.

23. *Precis des Leçons publiques de Chimie & d'Histoire naturelle*, qui se font toutes les Années aux Ecoles de Medecine de l'Université de Nanci; par M. *Nicolas*, Conseiller-Medecin du Roi, Professeur Royal de Chimie, Inspecteur honoraire des Mines de France, Membre
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de l'Academie de la dite Ville, & de plusieurs autres. Seconde Edition, revuë, corrigée, & augmentée. Tomes II. 8vo. Nanci, 1787.

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25. Memoires sur les Fievres intermittentes malignes; par M. *Durand*, Docteur en Medecine de l'Université de Montpellier, Professeur du Cours public d'Accouchemens, etabli a Cahors, Correspondant de la Société Royale de Medecine. 8vo. Paris, 1788.

26. *R. Kirwan's* Physisch-chemisché Schriften, aus dem Englischen uebersetzt von *Lor. Crell*, d. A. D. &c. 8vo. 3 Vols. Berlin, 1783-3.

27. Ueber die neuere Geschichte der Chirurgie in den K. K. Staaten; eine Rede, &c. *i. e.* On the modern History of Surgery in the Imperial

rial Dominions ; a Discourse by *J. Hunczousky*. 4to. Vienna, 1787.

28. Observations sur un nouveau Moyen de guerir certaines Douleurs de Dents. Par M. *Pliffon*, Dentiste récu au College Royal de Chirurgie de la Ville de Lyon. 8vo. Lyon, 1788.

The cases to which, according to this writer, his method is applicable, are those of caries attended with a collection of matter in the cavity of the tooth. His mode of treatment consists in filing away the carious part of the tooth till he has laid open the whole of that part of the cavity corresponding with the caries. He mentions thirteen cases in which this was done with success ; and in all of these, we are told, a portion of foetid matter was discharged. He observes, that, in cases of this sort, filling up the cavity with gold leaf, or with lead, frequently serves only to increase the pain.

29. Ricerche fisiche sopra la Fermentazione vinosa, presentate al Concorso dell' Anno 1787 dal Padre *Gio. Batt. da S. Martino*, e qualificate con l'accesfit della reale Accademia de Georgofili di Firenze. 8vo. Florence, 1787.

30. Del Nitro Minerale, Memoria Storico-fisica dell' Abb. *Alb. Fortis*. 8vo. 1787.

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31. Esame della Teoria del Calor del celebre Inglese *Crawford*, con alcune nuove congetture sopra la Medesima Materia, di *Leopold. Vacca Berlinghieri*. 4to. Pisa, 1787.

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33. Opere Anatomiche e Chirurghiche di *Ambrogio Bertrandi*, Professore di Chirurgia pratica nella R. Università di Torino, Membro della reale Accademia di Chirurgia di Parigi, della Società reale di Torino, e primo Chirurgo della S. R. M. del fu Re Carlo Emanuele, pubblicate, e accresciute di Note, e di Supplementi, dai Chirurghi *Gio. Antonio Penchienati* e *Gioanni Brugnone*, Professori nella Regia Università, e Membri della reale Accademia delle Scienze di Torino. Tom. V. 8vo. Turin, 1786-7.

34. *J. F. Blumenbach*, Prof. Med. Gotting. *Institutiones physiologicae*. 8vo. Gottingæ, 1787. c. Fig.

35. *J. F. Blumenbach* *Specimen Physiologiae comparatae inter Animantia, calidi & frigidi sanguinis; præmissæ sunt de nisu formativo & de Generationis negotio, Observationes nuperæ, Tabulis,*

Tabulis æneis illustratæ. 4to. Gottingæ, 1787.

36. *G. F. Hoffmann* Vegetabilia Cryptogamica. Fasciculus primus cum Tabulis æneis VIII. 4to. Erlangæ, 1787.

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38. *C. F. Reufs*, Med. Doct. & Prof. Tubing. Dispensatorii universalis nuper editi Supplementum, continuationem sistens remediorum medico-pharmaceuticorum; additamenta varia e *Gmelin*, *Essig*, *Elwert*, *Lieblein* & *le Chandeliers* scriptis chemico-pharmaceuticis, ut & e pharmacopœis Danica & Wurtembergica deprompta; morborum, & virium remediorum, conspectum brevem alphabeticum, regulas denique medico-pharmaceuticas, & terminologiam. 8vo. Argentorat. 1787.

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45. De Fatis fauſtis & infauſtis Chirurgiæ, nec non ipſius interdum indiſſolubili Amicitia

* *Viz.* De generatione plantarum — De organis mulierum genitalibus — De hominum generatione — De generatione & propagatione vermium in canali cibario hoſpitantium, & morbis ab iſdem origine habentibus — De anthelminticis.

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cum Medicina coeterisque studiis liberalioribus ab ipsius origine ad nostra usque tempora Commentatio historica. Auctore *N. Riegels*. 8vo. Hafniæ, 1788.

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the Crew in Merchant Ships that take with them neither a Physician nor Medicines. By *Dominicus Spedicati*, M. D. Staff-Surgeon of the Fleet. Translated from the Italian, with the approbation of the Imperial Russian College of Physicians. 8vo. St. Petersburg, 1787.

48. Geschichte des Zinks in absicht seines verhaltens gegen andere Koerper, und seiner anwendung auf Arzneywissenschaft und Kunste. *i. e.* History of Zinc, with regard to its affinity with other Bodies, and its application to Physic and the Arts. By *G. Fr. Christian Fuchs*. 8vo. Erfurt, 1788.

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54. Atti della Reale Accademia delle Scienze, e Belle Lettere di Napoli dalla Fondazione fino all' Anno 1787. 4to. Napoli, 1788.

55. *Essai sur le Phlogistique & sur la Constitution des Acides*; traduit de l'Anglois de *M. Kirwan*, avec des Notes de MM. *de Morveau*, *Lavoisier*, *De la Place*, *Monge*, *Bertholet*, & de *Fourcroy*. 8vo. Paris, 1788.

56. *Recherches, Memoires, & Observations, sur les Maladies Epizootiques de Saint Domingue*, recueillis & publiés par le Cercle des Philadelphes du Cap François. 8vo. Paris, 1788.

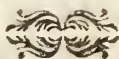
57. *Memoire qui a remporté le Prix, au Jugement de la Faculté de Medecine de Paris, le 22 Novembre, 1787, sur la Question proposée en ces Termes: — “ Decrire la maladie*

“ du Mesentere, propre aux enfans, que l’on
 “ nomme vulgairement *Carreau* ; l’envisager
 “ dans son principe ; rechercher les causes qui
 “ la produisent, & exposer avec precision les
 “ moyens de la prevenir, & ceux de la guerir.”

Par M. *Baumes*, Docteur en Medecine de la
 Faculté de Montpellier, &c. 4to. Nismes,
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58. Manuel du Pharmacien, ou Instructions
 sur les differens Objets d’Etude necessaires
 aux Elèves en Pharmacie ; par M. *de Machy*,
 Censeur Royal, & Demonstrateur d’Histoire
 naturelle au College de Pharmacie de Paris.
 8vo. 2 Vols. Paris, 1788.

59. De l’Origine des Forces magnetiques ;
 par M. *Prevost*, de l’Academie Royale des Sci-
 ences & Belles Lettres de Berlin, & Professeur
 Honoraire a l’Academie de Geneve. 8vo.
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LONDON MEDICAL JOURNAL.



- I. *An Account of an epidemic Fever that prevailed in Cornwall in the Year 1788. Communicated in a Letter to Dr. Simmons, F. R. S. by William May, M. D. Extra-Licentiate of the College of Physicians, London; and Physician at Truro in Cornwall.*

ABOUT the latter end of April, or the beginning of May, 1788, an epidemic made its appearance in this neighbourhood. The weather was rather warm than otherwise, and had been so, with little variation, for a few weeks preceding. At St. Ives, in the western part of this county, and in other small towns in various parts of it, a malignant fever had, for near two years past, been exceedingly rife among the poorer inhabitants, and carried off great numbers of them *. During this time also the small
 pox

* It deserves to be remarked, that in these places, owing to a failure, for the last four or five years, in the pilchard fishery, upon which the poorer inhabitants principally depend for their
 I support,

pox had been occasionally epidemical in several parts of the county.

This epidemic was truly a fever of the typhus type, though accompanied in most instances, especially at the attack, with symptoms of an inflammatory tendency. The tongue, during the first five or six days, was covered with a whitish mucus; the countenance was rather turgid, and the pulse neither weak nor considerably accelerated. The thirst was seldom considerable, the belly for the most part was costive, and the skin parched and dry.

In some cases slight rigors were observable, followed, as in ordinary cases of pyrexia, with an increase of heat, and sometimes with sweating; but this seldom happened: when, however, a determination to the skin took place, it was productive of great relief.

support, a considerable increase of poverty had taken place amongst them. The consequences of this must have been a decrease of animal food, and the want of other things necessary for their sustenance. To this circumstance, as no specific contagion could be traced, we may ascribe the rise of this formidable disease. I am indebted to my friend, the Reverend Mr. Townsend, of Pewsey in Wiltshire, for some information respecting the same disease, evidently produced by the same remote cause, in his neighbourhood.

There

There was considerable oppression at the breast, with great and general languor; the head was loaded, and there was constant pervigilium.

A disposition to delirium shewed itself early in the disease, sometimes so soon as the third, but more commonly about the fourth or fifth day. The disease was marked with no other symptoms of consequence till towards the sixth or seventh day, when the most unequivocal appearances, of a typhus type, pretty uniformly shewed themselves. The countenance at this period became pale and dejected, the frequency and weakness of the pulse greatly increased, the colour of the tongue changed to a brownish cast, marks of imbecillity were more evident, and, if a state of absolute delirium did not exist at this time, there was always a state of pervigilium and inquietude present, which evinced considerable disturbance of the nervous system, and denoted some derangement of the functions of the brain.

Among the anomalous affections, a dyspnœa was frequently a most troublesome symptom, which, together with pain in some part of the chest, seemed to indicate thoracic inflammation;

tion; and I was, in two or three instances, nearly deceived by these appearances.

The disease passed through whole families, and not unfrequently spread throughout a neighbourhood, especially where it happened to affect a town or village situated low, and consequently excluded from a free ventilation. It seemed to attack indiscriminately persons of all ages and constitutions, and was scarcely, and I think not at all, less violent in robust and strong than in weak and emaciated persons; nor did it vary greatly in its duration, which was, in general, more distinctly marked than in any cases I had ever before met with. The changes also during the progress of the disease were marked with more uniformity than had before occurred to me. I attended to these circumstances with much precision, having been accustomed to great scepticism with respect to the doctrine of critical days; and I could discover that exacerbations constantly happened towards the evening of the ninth, eleventh, and fourteenth days, which were followed by a manifest apyrexia. In some few instances, indeed, symptoms of convalescence appeared on the latter of these days, but more commonly the seventeenth put an end to the disorder. Such was the uniformity

mity with which this happened, that in many cases, when the fourteenth day had passed without any permanent remission of fever, I ventured to prognosticate, with much confidence, with respect to approaching convalescence, and was rarely deceived. Now and then the disease extended itself beyond the seventeenth day, especially where some petechiæ had made their appearance; and where this happened I confess that I could not, with any accuracy, ascertain any stated time of its termination, which sometimes did not take place till towards the latter end of the fourth week.

The treatment that I, in general, adopted, was briefly as follows: — An emetic of ipecacuanha was first exhibited, and the belly opened by some gentle laxative, such as manna and cream of tartar, or a clyster. The bark was then immediately administered in such form as best agreed with the stomach of the patient. In general, the bark in substance, combined with some aromatic, did very well, occasionally accompanied with small doses of the spiritus Mindereri or mistura camphorata. To obviate the determination to the head, blisters were applied to the back and arms, which were always found highly beneficial in abating the disturbance and

erethism of the nervous system; moderate doses of laudanum, given towards the evening, contributed in no small degree to this effect, and, even where there was a comatose tendency, were productive of material benefit. Wine was allowed in liberal quantities; and, with the repetition of clysters, once in twelve hours, or thereabouts, to obviate costiveness, every part of the tonic plan was adopted, and sedulously persevered in. Among other things, the bodies of patients were occasionally not only exposed to a free air, but washed with cold water once in twelve hours, and particular attention was paid to repeated changes of their linen and bed clothes. The degree of success which attended this method of treatment does not frequently occur; for of near fifty cases that fell under my observation two only terminated fatally; and it is remarkable, that in one of these cases a pain in the right hypochondrium had been mistaken, before I saw the patient, for a symptom of hepatitis, and upon this idea bleeding and antimony had been prescribed within twenty four hours of the patient's death. I have before observed that a pain in the side sometimes happened, with a difficulty of breathing, and, though but very seldom, a trifling cough: all these symptoms,

symptoms, however, constantly yielded to the tonic and antispasmodic methods already described.

That this disease was truly a fever of the typhus type cannot, I think, be doubted, although, from the increased action which took place at its beginning, it put on an appearance of inflammatory diathesis. This is, indeed, the true character of that fever which Dr. Cullen has described under the name of Synochus, and which he afterwards confesses to be no other, in his opinion, than a variety of typhus. This is his definition of the disease — “*Morbus contagiosus. Febris ex synocha et typho composita: initio synocha; progressu, & versus finem, typhus* *.”—I cannot, however, believe that the appearances of fulness, together with some hardness, in the pulse in these cases, are really symptoms of any purely inflammatory tension; for it has always been found that bleeding and the antiphlogistic regimen are peculiarly hurtful in affections of this kind; and it has frequently been observed by Dr. Willis, Dr. Huxham, and others, that even the smallest quantity of blood, drawn upon the second and third

* Synopsis Nos. Method.

days of the disease, has precipitated patients into a putrescent condition, accompanied with a degree of debility out of which the most powerful alexipharmacs were insufficient to rouse them*. I recollect having seen a lamentable instance of this—A fever, which was clearly of this particular species, became epidemical in a small neighbourhood; contrary to that whose history I have attempted above, its attack was confined principally to persons advanced in life. The symptoms of inflammation, as was supposed, were urgent at the beginning, and a dyspnœa and turgid countenance suggesting the probability of the existence of pneumonic congestion and phlegmasia, the lancet was freely used. The

* Vide Huxham de Aëre & Morbis Epidemicis; & Willis de Febribus, (cap. xv.) where the following case is related:—

“ Novissimo autumno, vir robustus, habitus corporis athleticæ,
 “ vultus tamen pallidi, & temperamenti frigidioris, in febrem
 “ incidit: die secundo cum calore & siti, doloreque in lum-
 “ bis immanissimo, torquebatur: cum sanguinem *in exigua*
 “ *quantitate* mitti prescriberetur, pseudo-chirurgus accersitus
 “ ipsum ferè ad sesquilibram detraxit: paulo post æger sudore
 “ frigido perfundi, viribus subito collapsis, rigore, pulsu de-
 “ bili, inæquali, & crebra leiputhymia tentari cæpit,” &c.—

It may be objected that this is not a case in point, as the fever proved to be truly a variolous one. I have the authority, however, of Sydenham and Huxham for the application of it.

consequences

consequences were, as I have related, sudden prostration of strength to an alarming degree, and in most of the cases a premature appearance of putrescence. Whether from the original violence of the disorder, or from the want of its real nature being discovered, I will not pretend to determine, but the fact is too interesting to be withheld, namely, that of ten or eleven persons who were affected with the disease not one of them recovered *.

It is a matter of important inquiry how far the synochus, as Dr. Cullen has defined it, deserves, in a practical view, to be considered as different from the typhus. Dr. Cullen, with his usual candour, expresses his doubts about the propriety of making such a distinction, and they are well entitled to the attentive consideration of practitioners: — “ Cum plures febres,” says he, “ nec inflammatoriæ, nec nervosæ
“ ex omni parte sint, neque idcirco vel ad

* This fact, melancholy as it is, does not stand alone. Speaking of a similar epidemic, under similar treatment I believe, Dr. Willis (de Febribus, cap. xiv.) says, “ Me-
“ mini in quibusdam villis, seniores fere omnes hoc anno vitâ
“ abreptos, ut vix superessent, qui traditionibus antiquitus
“ acceptis, Parociæ mores, & privilegia tueri potuerint.”

“ synocham

“ synocham vel ad typhum facile referendæ ;
 “ genus synochi, cujus typus hîcce regionibus
 “ frequens conspicitur, hic inferui. Inter ty-
 “ phum tamen, & synochum, limites accuratos
 “ ponere non possum, & an revera pro diversis
 “ generibus habenda, vel positis diversis, utri
 “ eorum synonyma auctorum referenda, sunt,
 “ dubito*.”—Again, in his First Lines, he ex-
 pressly declares his opinion, that there is no
 foundation for the distinction, in these words :
 “ I am disposed to believe that the synochus
 “ arises from the same cause as the typhus, and
 “ is therefore only to be considered as a variety
 “ of it †.”—With these sentiments, it may be
 expected, that, if we should be favoured with
 another edition of his valuable Synopsis, the syno-
 chus will not be permitted to stand as a peculiar
 genus of fever, but will be classed among the
 varieties of typhus, of which it is unquestiona-
 bly a species. Boerhaave, in his excellent
 Aphorisms, has given the description of a fever
 which very nearly resembles the epidemic above
 described : — “ Synochus putris dicta fuit, quæ
 “ debetur causis inflammatione simplici majo-

* Synops. Nos. Meth. Vol. II. page 79.

† First Lines of the Practice of Physic, Vol. I. page 126.

“ ribus,

“ribus, viscerum obstructioni, cutis oppilationi, & capillarium fere omnium, acrimoniæ vero acutiori, sæpe prorsus singulari *.”—Vogel has somewhat differently described it, and, except that the epithet *magnus* seems ill applied to the state of the pulse, has given an accurate definition of it:—“Synochus. Facie rubra, cute humida, pulsu magno & frequenti, crisi perfecta terminantur intra 21 dies †.”—Sauvages also, following Galen’s description, has given a similar account of the disease:—“Synochus. Decursus ad duas trese septimanas, cum pulsus robore sanum, in morbi statu saltem, notabiliter superante ‡.”—It certainly does not happen in fevers incident to this climate, that the pulse is found to exhibit marks of fulness and strength after the sixth or seventh day. In the history of the epidemic above related the pulse uniformly became quick and weak before this period of the disease. Indeed the hard, strong, and throbbing pulse, that accompanied the ardent inflammatory fever, or

* Aphorismi de Cognoscendis & curandis Morbis. 8vo. Leid. 1737.

† Vogelii Gen. Morborum, 16.

‡ Sauvages Gen. Morb. g. 81.

causus,

causus, of the ancients, (which did not materially differ, in my opinion, from the synochus of modern nosologists) occurs but very seldom in European climates; and there is an obvious reason why it should not. In every case of this species of fever that I have observed, the *condition of the pulse has been exceedingly different from that which indicates a true inflammatory diathesis of the system, and it was principally owing to my observation with respect to this difference that I was cautious of adopting the antiphlogistic regimen which, by the majority of symptoms, appeared to be indicated. This particular state of the pulse, in all instances, and most especially in cases of the kind here related, should be sedulously attended to, as being calculated to give a much better idea of the patient's real condition than all the other symptoms taken in the aggregate; for, as a very skilful Physician has said, "*Sine crebro, & diligente*
pulsus examine, medicus nec prognosticon
rite faciet, nec pharmaceam tuto instituet."

* The frequency of the pulse, indeed, did not exceed, till towards the fifth day, ninety, or perhaps ninety-five strokes in a minute; and it might be said, that, without being full or hard, or strong, it was only not a weak pulse.

I am

I am persuaded that in every case of true synochus this attention to the state of the pulse would alone be sufficient to prevent the use of the lancet, which, even in the earliest stages of the disorder, never fails to aggravate its symptoms, and to protract to an enormous length, if not to render it absolutely incurable *. In the case of a young man, whose disease put on appearances, such as have been mentioned, of pneumonic inflammation, blood had been drawn before I saw him. I found him with every

* The following passage, relative to this subject, in Dr. Gregory's *Conspectus Med. Theor.* (Vol. II. p. 577) is so extremely judicious, and at the same time so applicable to what I am here advancing, that I must beg leave to transcribe it: — “ Quin et in multis morbis ubi nimius sanguinis impetus, et corporis calor a nimis vehemente cordis et arteriarum actione fiunt, non semper convenit sanguinem mittere; nimium quia status iste sæpe cum magna infirmitate conjungitur, vel in hanc saltem brevi definit, veluti in febris variis generis, cum intermittentibus, tum continuis: interdum etiam idem status ad putredinem vergit, veluti in febribus quibusdam, aut variola confluyente, aut angina maligna: in his igitur et similibus casibus, *utcumque urgentes videantur*, sanguis vel cautissime detrahendus est, vel omnino non mittendus, quoniam talis exinanitio quæ primis morbi diebus, minus cauto medico prorsus necessaria videretur, postea, per suos effectus infirmantes, non modo inutilis, sed nocentissima plerumque foret.”

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R

symptom

symptom of the prevailing epidemic, with a sense of extreme oppression about the præcordia, and in the lowest state of inanition and weakness. The blood bore not the least marks of inflammation, but was of that kind which Huxham has described as indicating a loosened texture or broken crasis of the fluids. It was a mere gore, without the least tendency to a separation between the serous parts and crassamentum, and had not the smallest portion of coagulable lymph on its surface. The disease, in this case, ran out to a great length, was accompanied with putrid appearances, and a degree of fatuity existed for some time after the febrile affection had totally disappeared. In another case, which was under the care of a sensible Surgeon at Falmouth, a pain in the side, with oppression and difficulty of breathing, were mistaken for inflammatory symptoms, and bleeding and antimonials, with nitre, were directed by the Physician who was called in, imagining that the disease was a *paraphrenitis*. The consequence was a speedy deliquium, which was soon followed by convulsions, and their worst effects. The practice which, in the beginning of this paper, I have briefly recommended, will, I am convinced, be found generally successful

cessful in cases of this kind, in which a speedy recourse to the bark is of the utmost consequence. It is not meant to be insinuated that it has any thing of novelty to recommend it; but it has a better recommendation: it has been adopted by the best practitioners of this and other countries with singularly good effects, and several physicians of eminence have publicly recommended it*. One of these, Dr. Clark, of Newcastle, has published a number of cases in which this medicine was exhibited, without regard to those nice cautions usually observed, with more than ordinary success: and we have lately been informed that Dr. James, who was a truly respectable practitioner, administered the

* I might add, in confirmation of the propriety of the practice I have here recommended, the testimony of several respectable practitioners. Mr. Grant, a Surgeon of extensive practice at St. Austle, has informed me that of upwards of a hundred cases which he met with in the course of the last summer, and which were treated in the manner above mentioned, not more than four or five terminated fatally; and he farther observed, that bleeding and antimonials, which, in a few instances, were adopted, produced the most obvious bad effects. Mr. Rice also, of East Looe, and Mr. Trevosso, of Falmouth, gentlemen of great professional skill, with whom I had an opportunity of attending several patients, had repeated occasions to make the same observation.

bark, after having premised a dose or two of his celebrated antimonial, in most cases, and in liberal quantities *. With what success he did this it is not necessary for me to add. With respect to the time and manner of exhibiting this remedy, there are, however, some cautions very necessary to be observed; for as in intermittent fevers there would be impropriety, if not danger, in throwing in the bark during the existence of a paroxysm, so, in cases of the continued type, it may be improper to interfere with the operation of the *vis medicatrix naturæ* just at those periods of the disease when considerable exacerbations are expected to take place. I consider what Hippocrates has said of food † to be exceedingly applicable to the administering of bark where exacerbations are about to take place. That these exacerbations do happen, and that with a great degree of regularity, I am thoroughly persuaded; and in the instances

* Monro on Medical and Pharmaceutical Chymistry.

† “Εν δὲ τοῖσιν πᾶρξιμοῖσιν ὑποστέλλεσθαι χεὶρ τὸ προσθίναί
 “ γὰρ βλάδι. καὶ ὅποσα κατὰ περιόδους παρεξίνεται, ἐν τοῖσιν παρ-
 “ ξισμοῖσιν υποστέλλεσθαι χεὶρ.” *i. e.* “In exacerbationibus ci-
 “ bum subtrahere oportet; exhibere enim noxium est. Et quæ-
 “ cunque per circuitus exacerbantur, in exacerbationibus sub-
 “ trahere oportet.”—Aphor. sect. i. aph. xi.

here

here related they were generally followed by more or less of a determination to the skin, abatement of the perturbation of the intellectual function, and other marks of apyrexia. The interval between these exacerbations is the time in which the bark, aided by the methods already spoken of, should be industriously employed, and, for the reasons mentioned above, I would, upon the accession of an exacerbation, instead of the bark, substitute a small dose of some antimonial, by which a speedier determination to the skin might be promoted, and consequently the paroxysm sooner terminated: upon this the bark and the other parts of the tonic plan should again be had recourse to, and in this series would I proceed to the end of the disorder*.

In

* It is a matter of great satisfaction to me to find this suggestion, with respect to the manner of using antimony and the bark together, sanctioned by the respectable authority of Dr. Skeete, one of the Physicians of Guy's Hospital:—" In the beginning of fevers, where slight inflammatory appearances are sometimes present, or, at least, where weakness is not very apparent, I should have no objection to the occasional use of antimonials, at the same time that I would embrace every opportunity of administering the bark freely; for

In local congestions, blisters will be preferable to any other application, assisted by the warm bath, which is often necessary for obviating the spasmodic affections that so frequently occur in these cases.

Dr. Sydenham gave the name of variolous fever to an epidemic very similar to that which I have here described, and which happened in the years 1667, 1668, &c.* Dr. Huxham also, in his work *De Aëre & Morbis Epidemicis*, has given an interesting account of an epidemic which bears still a greater resemblance to that which is the subject of this paper. It prevailed at Plymouth in the month of July, 1729. The small pox were at that time rife in the neighbourhood. The disorder affected the stomach and loins, and was attended with an oppression of the breast, sighing, and great faintness. Bleeding, he says, unless at the beginning, (when probably it had better have been omitted) seldom did service. Vomits were

“ for both antimony and bark appear to me to possess such
 “ efficacy in the removal of fevers, as no theory of fever,
 “ nor of the operation of the remedies themselves, can ena-
 “ ble us to explain.” — Skeete on the Bark, page 193.

* Vide Opera Sydenhami de Epidemicis.

highly necessary, and, afterwards, frequent blisters gradually applied; gentle cardiacs, cinabar, opiates, sack whey, and diluting sub-acid liquors, drank plentifully, proved very beneficial. As soon as the signs of coction appeared, namely, a sediment in the urine and a remission of fever, the bark admirably assisted the cure. If a coma or delirium happened in the course of the disease, there was occasion to set cupping glasses on the neck and shoulders, to bleed, and immediately apply blisters, especially behind each ear and to the head, and forthwith inject a laxative clyster. This comatose and delirious tendency was remarkable in the synochus whose history I have given, and was constantly alleviated by camphorated medicines, combined with an opiate, and blisters. It is, indeed, a matter of surprise to me, that Huxham did not prefer these methods, which he has highly extolled, in cases of the same kind, to cupping glasses and laxative clysters; for I imagine it must be pretty obvious that in a disorder where “gentle cardiacs, opiates, and “sack whey,” were indicated, there could not have been occasion for bleeding or alvine evacuations, methods that can only be necessary in plethoric and inflammatory diseases. Indeed, in
another

another publication he has spoken of the same medicines, in the same cases, in a stile of animated eulogium:—" Camphor, by its anodyne, demulcent quality, is vastly serviceable in quieting the erethism, and bringing on compofure of fpirits and eafy fleep; and, when joined with an opiate, is the moft certain fudorific in nature;" adding, with his accuftomed energy, that " the elixir paregoricum, not only in this refpect, but in many others, is a moft noble medicine."—From this we may infer, that the giving anodyne medicines, or, as the difciples of modern fchools would call them, powerful ftimulants and anti-fpafmodics, fuch as camphor, opium, and wine, is not, as it has been fupposed, a practice perfectly new. Indeed we may go farther, and we fhall find that what has been pronounced a dangerous innovation, is really a moft judicious and confirmed good practice, and founded upon authorities which are almoft as old as phyfic itfelf; but it is not to thefe authorities I would have recourfe in defence of a practice which has been adopted upon better grounds than imitation of the ancients, namely, upon recent difcoveries with refpect to the medicines, and an improved pathology with refpect to the dif-eafe

ease in question. The enthusiastic declaration, however, of Asclepiades, "*Utilitatem vini æquari vix Deorum potentiâ,*" is much to my purpose, and is well followed by the cooler testimony of Dr. Cullen. "What are the stimulants that may be most properly employed, I am uncertain, as the use of them, in this age, has been rare; but I am disposed to believe that, of all kinds, wine is the best *."

It is not my design in this place to enter fully into a discussion respecting the use of these medicines; but I am induced to dwell upon the circumstance by the recollection of the difficulties I met with in many cases, to convince practitioners of the indispensable necessity of administering them, even where a determination to the head (which is only another expression for extreme irritability) was the most urgent symptom. In such instances, from apprehension of phrenitic inflammation, it is too common a practice to give laxatives, under an idea of making a revulsion, and unloading the vessels of the head, by a large purgation; and this is frequently done in the advanced stages of typhous

* First Lines of the Practice of Physic, 4th Edit. Vol. I. page 192. Vide also Huxham on Fevers, page 122.

fever. But it is a mistaken notion that an inflammation of the brain can happen under such circumstances. A *delirium mite*, or *typhomania*, may, it is true, be accompanied with some turgescence of the vessels of the head; but this is merely a collateral symptom, and is scarcely of consequence enough to require the topical evacuation of **cupping**. The proximate cause of this symptom is materially connected with the general systematic affection, and requires the same general method of treatment, namely, an anodyne antispasmodic and tonic plan. It was this state of morbid excitement and erethism for which Huxham, with great force, and equal judgment, recommended the camphorated and paregoric medicines. I shall add a quotation from Dr. Cullen's First Lines, in confirmation of my opinions with respect to the utility of anodynes and antispasmodics in this particular symptom: — “ It may be supposed, and on good
 “ grounds, that wine has an operation analogous
 “ to that of opium and some other narcotic
 “ medicines. It may, indeed, be said that we
 “ can distinctly mark its stimulant power only,
 “ which renders its effects in the phrenitic de-
 “ lirium manifestly hurtful, and in the mild
 “ delirium, depending on debility, as remarka-
 “ bly

“ bly useful. But in all this, the analogy with
 “ opium is still obvious *.”

Before I dismiss the subject I shall beg leave to subjoin a few remarks respecting bleeding, as it has been recommended by some authors in the species of fever which I have here treated of; *i. e.* in its earliest stage. The decision with respect to the propriety of this practice rests upon this plain question:—Is the disease, at any period, accompanied with a true inflammatory diathesis; or are not the appearances of inflammatory action at the beginning the fallacious re-action of the system, in consequence of the exertions of the *vis medicatrix naturæ* to obviate the effects of the remote causes of the disease? This is reducing a complex affair to an intelligible and simple question, which may satisfactorily be determined; for it is a well-known fact, that even in the most excessive state of weakness which the animal œconomy can suffer, this re-action of the system will sometimes assume a speciousness of inflammatory tendency, as happens in the advanced stages of typhous and hectic fevers: and Dr. Cullen very ingeniously explains the manner in which this takes place, in the 46th sec-

* First Lines, Vol. I. page 194.

tion of his First Lines. He has further declared, as we have already noticed, that the limits between the synochus and typhus are difficultly to be ascertained, and is disposed to believe that they originate in the same cause ; consequently that they are to be removed by the same means. We have seen that Dr. Huxham met with the same disease in which bleeding was seldom useful, but, on the contrary, gentle cardiacs and opiates were required. Dr. Willis and Dr. Sydenham give us the same testimony, which is confirmed by Dr. Lind and the best practitioners of the present day. As a farther proof, the instances here related are laid before the public, among which, although, in the early stage, all of them exhibited appearances that might be denominated inflammatory, not one of them was treated with evacuant means, nor, I am thoroughly persuaded, could have admitted of the use of them without endangering the life of the patient. I do not mean to assert, that inflammatory fevers, and such as require large and repeated venæsections, do not frequently happen ; I acknowledge that they do, though with much less frequency, I believe, than is generally imagined ; for, even in this part of the kingdom, where, from the purity and invigorating

rating qualities of the air, a considerable predisposition to phlogistic diseases may be supposed to exist, a true synocha is a very rare disease. Where it does happen, bleeding in large quantities, and repeated till the symptoms of inflammation disappear, is the only method upon which reliance can be placed, Let it not, therefore, be imagined that I would wish to prohibit entirely the use of the lancet; By no means: I only desire to prevent the abuse of it, impressed with the importance of the following caution, which I beg leave to recommend to the attention of those bold practitioners whose temerity, in this respect, may require some restraint: — “*Semper memoria tenendum, tantam sæpe quasi puncto temporis, ab interpestiva sanguinis detractiōe, corpori inferre perniciem, quantam neque optimi medici peritia, neque omnia medicinæ subsidia, postea compensare potuerint. Sanguis enim semel missus nunquam in venas redit, viresque cum illo amissæ in variis morbis haud facile reficiuntur* *.”

Truro,

January 26th, 1789.

* Vide Gregory's *Conspectus Med. Theor.* Vol. II. p. 575.

II. *A Case of Hepatitis ; with Remarks. Communicated in a Letter to Dr. Simmons, F. R. S. by Mr. George Wilkinson, Surgeon at Sunderland, Member of the Royal College of Surgeons, and Honorary Member of the Chirurgo-Physical Society of Edinburgh.*

JOHAN KEMP, a Schoolmaster, aged sixty-five years, and of a pretty hale constitution, was seized in June, 1783, with a shivering fit, succeeded by cough, dyspnœa, slight expectoration, and a heavy pricking pain, as he described it, at the lower part of the sternum, particularly towards the right side. His pulse was fuller and quicker than usual, but he had no great thirst : his appetite was diminished, and he was costive.

To relieve these symptoms volatile liniment was applied to the part affected, and a blister between the shoulders. A purgative was administered occasionally, and he was directed to take the lac ammoniaci with oxymel of squills in the course of the day, and a mild opiate at bed time.

Under this treatment he soon grew better, so that at the end of eight or nine days I discontinued

nued my visits, and saw no more of him till September 12th, when I was again called to his assistance. I then found him labouring under a great difficulty of breathing, (though sitting up in a chair) with a yellowness of the eyes, and his legs in a very œdematous state. He complained much of thirst, and had frequent inclination to vomit; his pulse was very quick; his urine remarkably high coloured, and little in quantity, and at this time his belly was so obstinately constipated, that he had passed no stool for nine days.

His complaint, which, at the time of my former attendance, I had suspected to be pulmonary, and treated accordingly, now bore evident marks of being a case of hepatitis; and of this I was more clearly convinced on perceiving a pretty large and somewhat unequal swelling extending from under the xiphoid cartilage to the navel, and which seemed to elevate a little the false ribs of the right side.

Upon my inquiring more particularly into the cause and progress of his complaint, the patient informed me he had often felt a sort of uneasiness or pain about the region of the liver, which he imagined might proceed from his leaning much against a desk in writing. This pain,
he

he observed, had gradually increased for some time before I first saw him, which was now about three months since; and he had been attacked with several irregular shivering fits towards night, accompanied with sweating, and had been much troubled with costiveness. The colour of his stools had for some time been whitish.

The region of the liver was now not only extremely painful on the slightest pressure, but the patient likewise felt the pain extend to the top of his shoulder on the right side, more particularly whenever he attempted to lie or turn on the opposite side.

The nature of the disease being now so fully ascertained, I determined (notwithstanding the advanced age of the patient and the great reason I had to fear that a suppuration had already taken place) to try the effect of mercury, bearing in mind the adage of Celsus, *melius est anceps remedium quam nullum*.

I began by administering a purgative clyster, and in the course of the day he took two scruples of *pilul. ex colocynth.* and six grains of calomel made into pills. These medicines, however, had produced no evacuation on the morning of the 13th, notwithstanding another clyster had been injected and all the pills had been retained,

tained, though not without some difficulty on account of the irritable state of the stomach.

Being induced to think that a superabundance of acidity might be the cause of hindering the solution and consequent operation of the medicines lately administered, I directed him to take two scruples of salt of tartar and half a drachm of magnesia alba in a suitable vehicle every two hours. The good effects of this mixture were evidently conspicuous on his taking the second dose, as it not only produced a very copious stool, but likewise a considerable discharge of urine.

Two drachms of the strong mercurial ointment were now directed to be rubbed on the region of the liver, and five grains of calomel were administered in a bolus at bed time. These remedies were occasionally repeated till the 18th. He had then rubbed in about six drachms of the ointment, and taken twenty grains of calomel. The swelling had greatly subsided, and was less painful when pressed; but he complained of a fulness about the umbilical, or rather hypogastric region, which, on my striking it with my finger, shewed evident signs of fluctuation. His stools hitherto had been whitish; but this day he voided one which

appeared to be mixed with bile. The day following (Sept. 19) the mercurial treatment was suspended, and, in its stead, I directed a saline mixture with oxymel of squills, aromatic tincture, and laudanum.

His mouth, by this time, was become affected, and a moderate salivation had taken place; the yellowness of the tunica conjunctiva had disappeared, and the quantity of his urine was considerably increased. On the 20th, however, he was suddenly alarmed upon voiding, by stool, a considerable quantity of whitish purulent matter, which bore some resemblance to the coagulable lymph that is oftentimes seen in the cavity of the abdomen in inflammation of the peritonæum.

I found him very faint after this evacuation, and observed, to my great surprise, that the swelling of the belly had entirely subsided.

More or less of the purulent discharge continued to appear with his stools till September 27th, at which period he seemed to be beginning to recover, though he was still extremely weak. His salivation had ceased, and his urine was in proper quantity, though sometimes mixed with a sort of mucus resembling pus. I now
advised

advised him to take a decoction of bark occasionally, and an opiate at bed time.

Two days after, viz. on the 29th, I was alarmed on finding him uneasy and feverish, with a quick pulse, and thirst, he having been seized the preceding evening with a smart shivering fit, and passed a very indifferent night.

I now determined to have recourse immediately to the bark in substance, and he took of it from two scruples to a drachm every three or four hours. This mode of treatment was persevered in, with some little variation, for about a fortnight, at the end of which time he was well recovered, and is now in a tolerable state of health.

This case may perhaps claim the attention of the medical reader on account of its remarkable termination, and of its affording a well-marked instance of a disease that is generally allowed to be of rare occurrence in Europe, I mean considered as a primary affection, for such it seems to have been in my patient. In the symptomatic or secondary hepatitis, which is by far the most frequent species of the disease in this country, the complaint rarely terminates in suppuration, but in a schirrus, of which the consequence is dropsy.

In the case I have related there seems to be great reason to think that the complaint was a partial one, I mean with respect to its being confined to a part of the liver, and to a part that favoured its exit into the intestinal canal. This will appear, perhaps, still more probable when we consider the speedy termination of the disease, and the facility with which the patient recovered.

It must be allowed that abscesses of the liver terminate less frequently by stool than otherwise; yet it is perhaps not improbable that they occur much more frequently than medical practitioners, from not always attending sufficiently to the state of the fæces, are aware of.

What share the use of mercury had in the favourable termination of this case I will not pretend to determine; but it seems to be certain that this remedy has been used with a degree of success superior to every other in affections of the liver; and the remarkable case, recorded by Dr. Clark *, wherein it would seem that suppuration had begun to take place, induced me, notwithstanding the disparity of our patients' ages, to venture on its use.

* Edin Med. Comm. Vol. V. p. 423.

If the nature of this case had been clearly ascertained in the beginning, suppuration might perhaps have been prevented; but the obscurity of the symptoms led me, as I have already mentioned, to consider them as effects of pulmonary affection only, and of course to lose sight of the main object. This case, therefore, besides serving as a striking proof of the wonderful resources of nature in affections of this kind, may likewise be of use with respect to the diagnostic in similar cases. These considerations, Sir, have induced me to communicate it to you for insertion in your valuable publication.

Sunderland,

February 10, 1789.

III. *Farther Remarks on the Efficacy of Blue Vitriol in the Cure of Dropsy* *. Communicated in a Letter to Dr. Simmons, F. R. S. by William Wright, M. D. F. R. S. and of the Royal College of Physicians and Royal Society of Edinburgh.

A GREEABLY to my promise, I now send you some farther remarks on the cure of

* See Vol. I. page 266.

certain

certain species of dropfy by blue vitriol, which I hope you will deem worthy of a place in the London Medical Journal.

From the number of fatal accidents that have happened from the use of copper vessels, speculative authors have set down all the preparations of that metal as virulent in their effects, and of a deleterious quality ; but this depends altogether on the substances with which the copper is combined. It is indeed certain that verdigris, however formed, and taken into the stomach in any considerable quantity, destroys animal life ; but, on the other hand, *cuprum ammoniacum** (Pharm. Edinensis), in proper doses, has been found efficacious in several cases of epilepsy and other spasmodic diseases : and blue vitriol has long ago been found effectual in removing obstinate agues, and lately very beneficial in phthisis pulmonalis. The last-mentioned preparation I have found not only a safe but successful remedy in certain species of dropfy, even in ascites, where there was a fluctuation to be felt in the abdomen, depending perhaps solely on a relaxation and debility of the whole system. As farther proofs of its good effects in affections

* Copper combined with the volatile alkali.

of this sort, I shall relate the two following cases ;

C A S E I.

John M'Laurin, aged fourteen years, son of a poor woman in the town of Falmouth, on the north side of Jamaica, from living by the side of a morass, had contracted an intermittent, which lasted from August, 1784, till April, 1785, when it first degenerated into a remitting, and then into a continued fever. He was rescued at length from this dangerous state by the skill and humanity of Dr. Brown : but after this fever had left him he neither had appetite nor recovered his strength.

When I visited him about the middle of April he was very weak ; his face was pale and bloated ; his feet swelled towards bed time ; and his urine was scanty and high coloured.

From the duration of these fevers I was at first led to think that the hydropic symptoms were owing to visceral obstructions : I therefore ordered one grain of calomel and twenty drops of laudanum to be given at going to bed. These medicines were taken regularly for the space of a week, but without success : for the

anasarca became general ; the scrotum and penis were greatly distended ; the abdomen was swelled, and there was a fluctuation of water in it to be felt.

I now began to think that the opinion I had at first entertained of the cause of the symptoms might not be well founded, and that what I had ascribed to visceral obstructions might perhaps be merely the consequence of debility : I therefore determined to vary the mode of treatment, and to make trial of the blue vitriol, according to the following formula :

R. Vitriol. Roman.

Opii ana gr. fs.

Corticis canellæ aromaticæ gr. j.

Mucilaginis Gummi Arabici q. s. f. pilula.

He took this pill morning and evening, and at the end of a few days the dose of the blue vitriol was increased to one grain.

This medicine gave him no disturbance. The quantity of urine was remarkably increased daily. The swelling soon subsided ; his appetite returned ; and in the beginning of May his disorder was quite gone.

CASE

C A S E II.

A woman, named Penny, aged thirty years, who had in general been healthy, had for some months an obstruction of the menses, for which she had taken a variety of medicines.

In May, 1785, her abdomen was observed to swell, and, as there was an evident fluctuation of water, different diuretics were administered, but without success; so that Dr. Carlyle, who attended her, saw there was a necessity of tapping her, and this was accordingly done in the beginning of June.

To prevent a return of the dropsy, I recommended the use of the blue vitriol and opium. Dr. Carlyle gave her a pill containing, at first, one grain, and afterwards two grains of blue vitriol, with one grain of opium, every night at bed time. This medicine sat easy on her stomach, and excited no sort of uneasiness in the bowels. The quantity of urine was soon remarkably increased, and she found herself considerably mended.

About the middle of June, there being no appearance of the ascites, Dr. Carlyle pronounced his patient out of danger, and the pills were discontinued. The woman recovered her

wanted health ; the monthly discharge returned, and she has since continued well.

Edinburgh,

March 1, 1789.

IV. *Some Account of the medicinal Properties of a Bark lately procured from South America. By J. Ewer, M. D. Physician in Trinidad. Communicated in a Letter to Dr. Simmons by Messrs. Taylor and Davy, Druggists in London.*

To Dr. SIMMONS.

SIR,

FROM the very favourable account we have received of the medicinal properties of a bark which has lately been sent to us, we are induced to trouble you with a letter in its favour from a Physician of eminence in the West Indies, hoping by this means the Public may become acquainted with a valuable remedy, and have an opportunity of judging how far it merits the encomiums which he gives it.

This bark is known by the name of *Cortex Angusturæ*. We are able to supply with it any
6 persons

persons who may wish to give it a trial; and if its good effects should be confirmed by experience here, we shall take care to procure an ample and regular supply of it.

We remain, SIR,

Your obliged and obedient Servants,

TAYLOR and DAVY.

Little Britain,

March 24, 1789.

To Messieurs TAYLOR and DAVY.

GENTLEMEN,

I have ordered to be shipped to you from Grenada a quantity of bark which has been brought hither by the Spaniards from Angustura in South America, and has acquired great reputation here in all those cases in which we have been accustomed to employ the Peruvian bark, over which it has this advantage, that a smaller dose of it will produce the same effect.

With respect to its sensible properties, it is exceedingly bitter, and leaves a pungent heat in the mouth; it has a light aromatic smell; its exterior surface is almost white, and its interior of a light brown colour. In many cases of

U 2

fever

fever I have used it with success; and in two or three cases I have found a single dose have a striking good effect. As an external application in a putrid fever I had lately a strong proof of its efficacy. In this case the patient's skin was of a greenish yellow colour, and had a number of large livid spots; he had hiccough and a vomiting of dark-coloured dissolved blood; a mortification had begun in his throat, and his strength was exceedingly exhausted. As neither the Peruvian bark nor any thing else could be retained on the stomach, and as I did not think it right to trust to this bark given by injection alone, I ordered flannel wetted with a strong warm decoction of this bark to be wrapped round his body and extremities, and kept constantly wet. On seeing him a few hours after I was agreeably surprised on finding the livid spots removed, the greenish colour of the skin gone off, and the hiccough and vomiting ceased. He could now keep the Peruvian bark, mixed with a strong infusion of this bark, on his stomach, and soon after was able to take any kind of nourishment. As he complained of being uneasy at laying so long in wet clothes, his attendants discontinued the use of the fomentation, and in a few hours the greenish*yellow colour of the skin and

and the livid spots returned, but neither the vomiting nor hiccough. The fever was now increased considerably, and his strength diminished. The fomentation was again had recourse to with the same or even better success than before; for, when it had been applied a few hours, he was so much better as to be able to get out of bed and sit up without assistance: it was, however, discontinued again for the same reason as at first, and the symptoms again returning, he died in two days.

In this case it evidently appears that beneficial effects attended its use; and it is much to be regretted that the obstinacy of the patient prevented the continuance of a remedy which, even under the circumstances I have mentioned, afforded such a rational hope of success.

This bark is used with great advantage among our slaves here as a bitter and stomachic. It has also done great service in the dysentery, a disease in this country both frequent and fatal.

I am, GENTLEMEN,

Your most obedient, humble Servant,

J. EWER.

Trinidad,

August 20, 1788.

V. Farther

V. *Farther Account of the Bark described in the preceding Article; being an Extraēt of a Letter from Alexander Williams, M. D. Physician at Trinidad. Communicated to Dr Simmons by Mr. William Blizard, F. R. S. and S. A. Surgeon of the London Hospital.*

THE bark in question is brought to us by the Spaniards from Angustura in South America, packed in straw, in pieces from one to two feet in length, and from an inch to an inch and a half in width.

It is of a brownish yellow colour; has a raw unpleasant smell, and a very disagreeable bitter taste, without any aromatic warmth. Its raw smell, however, I attribute entirely to its freshness, as it loses it in a great measure, if not wholly, by being dried in the sun or baked over a gentle heat, and even acquires in its room somewhat of an aromatic one, and the bitter becomes less disagreeable.

It gives out readily to either a watery or spirituous menstruum, tinging the fluid of a pale gold colour. It is in one of these modes, chiefly however in the latter, that our planters use it among their negroes in fever, and pains of the belly, stomach, &c.

The

The tree from which it is got is not yet known here ; but we hope soon to become acquainted with it, as some of our botanical gentlemen have written for the flowers, &c., in order to investigate it thoroughly.

The virtues of this bark seem to be pretty similar to those of the Peruvian bark ; in some of these it has the advantage even over the latter, particularly in that of putting a stop to the paroxysms of an intermittent fever more speedily, less quantity of it being required, seldom more than six or eight doses being necessary ; nay, I am told by some gentlemen, that a single dose has often had the desired effect.

It has, too, this farther advantage, that it does not cause that disagreeable sense of weight and fulness in the stomach, with costiveness, which the Peruvian bark most frequently occasions, but keeps the belly gently open. It is found of the greatest service in diarrhoeas, dysenteries, and other complaints of the intestines, which the negroes are so subject to ; and I believe will always prove useful in every disorder arising from laxity and want of tone in the muscular fibre. As an external application I have little or no experience of its effects. I should be much surprised, however, if it should not prove
equally

equally useful as it has done as an internal one. I am confident great advantage may be expected from it when externally applied to gangrene, old flaccid ulcers, and the like complaints.

Dr. Ewer assures me he has seen the best effects from an external application of it in a case of fever that was highly putrid. In this case the whole skin had already become discoloured with livid spots, a mortification had taken place in the throat, and even the black vomiting and hiccough had come on.

I will not at present say any thing more than merely what relates to my own case, and then leave you to judge whether this new remedy does not deserve your and every other medical person's candid trial.

About a month ago, after much previous fatigue, and exposure to noxious effluvia, I was seized with fever. I immediately took some emetic tartar, and discharged a great quantity of bile; after which the fever intermitted: being very costive, however, I thought it proper to take some aperient medicine; but before this had begun to operate my fever returned, attended with a violent pain in the side and great difficulty of breathing, for which I applied a blister to the affected part, and took some more
emetic

emetie tartar ; the fever then again intermitted, and I immediately began the use of the Peruvian bark, not being yet acquainted with this new bark. I found, however, that the fever, notwithstanding the use of the bark, assumed a tertian type, and continued so for three weeks, when I was advised to make trial of this new bark ; which I did, and by its means got rid of the fever immediately, it having returned but once after its use. A few days ago, after sitting up two or three nights successively, I was again attacked with fever ; but not having any of the new bark by me, I had recourse to the Peruvian bark ; of which, however, I could not take more than four doses before I was obliged to discontinue its use from the disagreeable sense of weight and fulness that it caused : indeed I rejected the fifth dose ; upon which I sent to Dr. Ewer, and procured a little of the new bark, and took a strong infusion of it with Madeira wine during one day, which put a final stop to the fever.

Trinidad,

Sept. 11, 1788.

VI. *An Account of a Method of performing the Operation of Lithotomy at two different Times.* By Petrus Camper, M. D. F. R. S. Honorary Professor of Physic, Anatomy, and Surgery at Amsterdam, Fellow of the Royal College of Physicians and of the Royal Society of Edinburgh, of the Imperial Academy at St Petersburg, and of the Royal Academy of Sciences and Royal Medical Society at Paris, &c. Translated* from the Dutch.

I SHALL begin this account of an improved method of performing the operation of lithotomy, which the celebrated M. Louis has for some time adopted with great success, by mentioning the information I was favoured with lately, when at Paris, by M. Louis himself on this subject.

* Just as this article (which is extracted from the *Nieuwe Vaderlandsche Letteroeffeningen*, a periodical work published at Amsterdam) was going to the press, we received, with infinite regret, an account of the death of the learned and benevolent Author, at the Hague, (where he was a Member of the Council of State) in his 67th year, April 7th, 1789.—
EDITOR.

His

His usual method, as he observed to me, of cutting for the stone, is by the lateral operation as improved by Hawkins, and which is too well known to render any account of it necessary on the present occasion. M. Louis is of opinion that, in this operation, it is not the incision into the bladder which occasions the greatest difficulty in the cure, but rather the immediate removal of the stone as soon as the incision is made; and this for these obvious reasons, that the bladder must necessarily be in a painful and irritable state from the introduction of the staff, and liable to be injured by the exertions that may be requisite to extract the stone immediately. In cases of this sort, he observes, the bladder, until the incision is made, suffers violent pain from the difficulty with which the urine is voided, and likewise from the introduction of the staff and other instruments requisite in the operation; and the consequence of this is a constant and powerful contraction of the irritated part, so that one can only, as it were, by force get into the bladder to take hold of and extract the stone. Indeed I myself can affirm that both during the extraction of the stone, and afterwards, I have frequently seen very alarming symptoms take place, al-

though the operation was performed by very able and experienced surgeons.

M. Louis assured me, that since he had omitted to extract the stone immediately after the incision he had not lost a single patient by lithotomy, an operation which is in general, with good reason, considered as a very dangerous one*. On the day appointed for the operation, his practice for some time past has been to proceed no farther in it than the making the incision into the bladder †. As soon as this part of the ope-

* It has been well observed by one of the latest and most judicious Writers on Surgery, that the hazard attending the operation of lithotomy may be considered as corresponding with the size of the stone to be extracted. In healthy subjects, when the stone is small, and the operation is properly performed, he is inclined to think that not above one dies in twenty. But although a few instances have occurred of patients recovering from whom stones have been extracted of a large size, yet, whenever the stone exceeds seven or eight ounces in weight, he is of opinion that not above one in ten recovers.—See Mr. Bell's System of Surgery, Vol. II. page 114.—EDITOR.

† Although M. Louis has adopted Hawkins's method, yet he thinks the other modes of performing the lateral operation, as practised by Rau, Cheselden, and Le Dran, may be quite as advantageous as that is when the operator is accustomed to them.

ration

ration is accomplished, the patient, who, by means of the opening made into the bladder, has a free and easy outlet for his urine, is put to bed, and the next day M. Louis examines the wound carefully, and endeavours to ascertain what nature has done, or is actually doing, to rid herself of the stone. He sometimes waits till the third, fourth, or even fifth day after the incision before he attempts to extract the stone by means of an instrument, and the removal of it then, he observes, is so easy to the operator, and so little painful to the patient, as would *a priori* be deemed almost incredible.

In case there are several calculi, he proceeds in the same cautious manner, and waits for a favourable opportunity to extract them.

The great advantages of this method struck me very forcibly, and seemed easy of explanation from analogy with those cases in which we see other extraneous bodies, such as glass, bullets, portions of fractured bone, &c., make their way gradually outwards by suppuration, and as it were almost insensibly, by the powers of nature alone; and I can easily conceive that the stone, as an extraneous substance, will, after the incision into the bladder, procure itself an exit in the same manner. Indeed I am able to
recollect

recollect instances where, after the lateral operation, stones left behind in the bladder have been discharged through the wound almost without the knowledge of the patient : I had, therefore, no doubt of the good effects of this mode of treatment.

This improvement is not so new as might perhaps be imagined ; for M. Louis has traced it to the time of Peter Franco, who, more than two centuries ago, recommended the same method of operating.

I had no time while at Paris to look into Franco's work ; but since my return I have perused a copy of this scarce book, for which I am indebted to Professor Roell. I call it a scarce book, because there is no copy of it in the libraries belonging to the Universities of Leyden, Franeker, or Groningen. It is not in the collection published by Uffenbach * ; and even Haller, who seems to have been acquainted with the general merit of Franco as a surgical writer, has paid but little attention † to the particular passages here alluded to.

My

* Thesaurus Chirurgicus. Folio. Francof. 1590.

† *Esse ubi præstet lapillum post vesicam incisam sibi relinquere, qui facilius sub tempore suppurationis elabatur*, is all that

My copy of Franco's book * is dated Lyons, 1561 ; but, according to Haller, a former edition of it had appeared some years before, viz. in 1556, under another title.

In this work he treats very fully of different surgical methods of treatment, and in particular of lithotomy.

In his thirty-second chapter, speaking of the fatigue a patient undergoes when there is more than one stone in the bladder, he makes use of the following expressions : — “ Some,” says he, “ have kept their patients so long under their hands, that they have died. It would be better, therefore, to do it at two times, as will hereafter be shown, than thus to hasten death.

that Haller says of this method in his account of Franco's book.— See his *Bibl. Chirurg.* Tom. I. p. 211.— EDITOR.

* A copy of it is in the British Museum. It is entitled “ *Traité des Hernies ; contenant une ample declaration de toutes leurs especes, et autres excellentes parties de la Chirurgie, assavoir de la Pierre, des Cataractes des yeux et autres maladies, desquelles comme la cure est perilleuse, aussi est elle de peu d'hommes bien exercée : avec leurs causes, signes, accidens, anatomie des parties affectées, et de leur entiere guerison. Par Pierre Franco de Turiers en Provence, demeurant a present a Orenge.*” 8vo, Lyons, 1561.— EDITOR.

“ Nevertheless, as the wound is open, the
 “ urine, for some days, flows out more easily,
 “ and without so much pain ; though it is true
 “ that when the stone comes to lay upon the
 “ wound this cannot be done without pain.
 “ When, therefore, we find that another stone
 “ is remaining, we must try to bring it away,
 “ if the patient is free from fever, and there is
 “ nothing else to prevent it ; for most frequent-
 “ ly they present themselves spontaneously at
 “ the wound, whether there be one or several
 “ stones. It is then easy to draw them out
 “ through the wound ; but in case they should
 “ not come down and present of themselves,
 “ we must then make use of the method I have
 “ before described for extracting them *.”

In another place he says, “ If the stone is
 “ large or uneven, the strength of the patient
 “ may

* “ Aucuns ont tant tenu les patiens en leurs mains, qu'ils
 “ font demeurez morts. Il vaudroit mieux le faire a deux
 “ fois, comme sera cy après monsté, que de les precipiter a
 “ la mort. . . . Toutes fois a cause que la playe est ouverte,
 “ l'urine passe plus facilement par quelques jours sans tant de
 “ douleur ; bien est vray que quand la pierre se vient appuyer
 “ sur l'ulcere, que ce ne se peult faire sans douleur. Ayant
 “ donc entendu et connu qu'il y peult encores avoir pierre,
 “ il fault essayer la tirer si le patient est exempt de sievre, et
 “ autre

“ may be exhausted, or he may even die under
 “ the hands of the surgeon, and this as much
 “ from the pain as from the great loss of blood.
 “ I find it better, therefore, (as I have
 “ done several times) to do it at two times *.”

Franco describes this mode of operating in the following words :—“ First,” says he, “ the
 “ patient must be made ready, and after-
 “ wards the incision is to be made in the
 “ same manner neither more nor less than was
 “ directed in the preceding chapter : this be-
 “ ing done, a tent, if you will, may be intro-
 “ duced, there being no occasion at this time
 “ to make any attempt to get away the stone,
 “ unless it should chance to present itself at the
 “ wound ; but, after making the incision, dres-

“ autre chose n’empêche, car le plus souvent elles se viennent
 “ rendre d’elles mêmes à la playe, soit qu’il en y ait une ou
 “ plus. Alors est facile les tirer hors par la playe même.
 “ Et si d’elles mêmes ne descendoient bas, et que ne se pre-
 “ sentassent, il faut user des moyens que avons dit cy devant
 “ pour les y amener.”—Franco, *Traité des Hernies*, p. 128.

* “ Si la pierre est grosse ou roigneuse, la force du patient
 “ peut être prostrée, ou bien demeurer entre les mains du
 “ maître, tant à raison de la douleur, que de la grande fluxion
 “ du sang Le trouve donc meilleur (comme j’ay fait plu-
 “ sieurs fois) de le faire en deux fois.”—*Ibid.* p. 123.

“fings must be applied to the wound, with ban-
 “dages, as before mentioned. After some
 “days, when the patient appears to be in a
 “good state, and without fever, (which is not
 “to be expected unless he keeps to a good
 “regimen) if the stone presents itself at the
 “wound, which it most frequently does, as I
 “have several times experienced, it must then
 “be extracted in the manner already described.
 “But if it should happen not to present itself,
 “it must be brought down by introducing the
 “finger into the rectum, and compressing the
 “lower part of the belly *.”

* “Premierement il fault que le patient soit preparé, et
 “apres faire l’incision en la mesme facon ne plus ne moins
 “qu’avons dit au chapitre precedent : et l’ayant faite on
 “pourra mettre une tente si l’on veult ; n’estant besoin de rien
 “tenter apres la pierre pour ceste fois, si d’aventure ne se pre-
 “entoit d’elle mesme à la playe : apres avoir faite l’incision,
 “fault mettre les appareils dessus la playe avec bendages,
 “comme dessus. Apres quelques jours quand on connoistra
 “le patient estre en bonne disposition et sans fievre (laquelle
 “ne luy adviendra moyennant qu’il tienne bon regime) si la
 “pierre se presentoit a la playe, comme le plus souvent fait,
 “ainsi qu’ay par plusieurs fois experimenté, faudra la tirer
 “suyvant la maniere exposée. Mais ne se presentant point il
 “a fault faire descendre en mettant les doigts au fondement,
 “et en comprimant le petit ventre.”—Ibid. p. 134.

He

He speaks of this as a method peculiar to himself, and not described by any former writer. — “Some,” he observes, “may think it
 “strange to leave a patient in this manner,
 “undisturbed, the space of five or six days,
 “more or less, after making the incision. It
 “is certain, however, that persons of good
 “judgment, when they have heard the rea-
 “sons, have been satisfied*.”

He farther confirms the utility of this mode of treatment by the following remarks: — “It has
 “sometimes happened,” says he, “that, after
 “having extracted a stone, the patient has been
 “so weak I have not dared to undertake any
 “farther examination to know whether any
 “other remained, fearing lest he should die
 “under my hands. But having put the dress-
 “ings on the wound, and bound up the pa-
 “tient in the manner already described, I have
 “left him till he was become stronger, and
 “very often have found, in changing the first
 “dressings, or afterwards, that the stone which

* “Aucuns le trouvent estrange de laisser son patient ainsi
 “en repos l’espace de cinq ou six jours plus ou moins apres
 “avoir fait l’incision. Bien est vray que gens de bon juge-
 “ment, quand ils ont entendu les raisons ont esté satisfaits.”
 —Ibid. p. 138.

“ had remained was come entirely away of it-
 “ self. . . . Observing these things, and having
 “ several times experienced them, I have fal-
 “ len on the method contained in this chapter ;
 “ that is to say, that, after the incision is made,
 “ the stone is not to be immediately extracted
 “ unless it presents of itself*.”

The foregoing passages will be sufficient to show the accurate and judicious manner in which Franco has treated this subject, and how well he deserves to be quoted as an authority for this mode of treatment by my experienced friend, M. Louis. The latter, however, deviates a little from Franco's method, by leaving a free passage for the urine instead of filling up

* “ Mestant quelque fois advenu, que apres avoir tiré une
 “ pierre le patient estoit tant debile, que je n'ausoye entre-
 “ prendre de le plus presser, pour savoir s'il y en demeuroit
 “ point d'autre, creignant qu'il ne mourust entre mes mains.
 “ Or ayant mis les appareils sur la playe, et bendé comme
 “ avons dit-dessus, je le laissoye jûsques a ce qu'il fust plus
 “ fort, et bien souvent ay trouvé que en changeant le premier
 “ appareil, ou apprest, que la pierre qui estoit demeurée es-
 “ toit sortie du tout dehors d'elle mesme Voyant ces
 “ choses, et les ayant par plusieurs fois pratiquées, j'ay col-
 “ ligé cette methode contenue en ce chapitre : assavoir qu'a-
 “ pres l'incision faite de ne tirer la pierre tout a la fois si
 “ d'elle mesme ne s'y presentoit.”—Ibid. p. 138 & 139.

the wound, and this he does with a view to prevent unnecessary pain to the patient.

It will perhaps be a still greater recommendation of this method when I add, that it is highly extolled by Fabricius Hildanus in his excellent book * on lithotomy. Manget also, in his *Bibliotheca Chirurgica* †, approves of this method.

* In his 16th chapter, entitled “ De quarto operandi modo, in Lithotomia usitato, qui meritó *Lithotomia Francolina* appellari potest,” in which, after treating fully of the method of operating described in the present paper, he adds his own testimony in its favour in the following words:—
 “ Quam probus ac prudens Lithotomus Francus iste fuerit, apparet. Idem quoque familiares ipsius de ipso testati sunt, quorum adhuc aliqui, cum anno 1586 Laufannam * venissem, in vivis superstites fuerant. Utinam operandi modus iste apud omnes lithotomos et castratores introduci posset; longé enim plures incisos evasuros existimo. Quoniam enim lithotomus ita apud se statuit, necesse esse, ut æger prima vice vel a calculo liberetur, aut moriatur, hinc sæpe fit, ut in incisione tantam profundat sanguinis copiam, vel adeo torqueatur, ut propter dolorem immanem, inflammationem, aliaque perniciofa symptomata mox subsequantia, vel in ipsa incisione vel statim post moriatur. Quæ omnia impediri possent, si præscriptum operandi modum imitaremur.” —EDITOR.

† Tom. I. p. 274.

* Franco resided many years at Lausanne.

I must

I must not omit to mention that Colot sometimes performed the operation of cutting for the stone at two different times. In his work * on lithotomy he observes † that this method made much noise at Court, and that the King had expressed himself pleased with the invention. Colot makes no mention of Franco in this part of his book, and indeed he advises this method only in cases of great debility ; for in general he directs ‡ the stone to be extracted immediately after the incision, lest the surgeon should find himself obliged to perform this part

* *Traité de l'Operation de la Taille ; avec des observations sur la formation de la pierre et les suppressions d'Urine. Ouvrage posthume de M. Fr. Colot ; auquel on a joint un discours sur la methode de Franco et sur celle de M. Rau. 8vo. Paris, 1727.*

† “ Ce fut la cure de M. l'Abbé de Chauvelin qui me donna lieu de faire l'operation de la pierre en deux tems ; cela fit beaucoup de bruit, particulierement a la cour, où la Majesté loua cette decouverte.”—Colot, p. 182.

‡ “ Pour ceux qui sont dans les grands accès de leurs douleurs, il faut enlever la pierre des qu'on a fait l'ouverture ; autrement on risque de se voir obligé de tirer la pierre dans le tems ou la nature travaille a faire la suppuration de la playe, ce qui l'empêcheroit de poursuivre son chemin . . . Il est donc tres rare de pouvoir obtenir ce que l'on se propose de cette methode.”—Ibid. p. 183.

of the operation when the wound has begun to uppurate : and he adds, that the advantages the surgeon may propose to himself from this method will be very seldom obtained.

In cases where the patient's strength is extremely reduced, Heister * advises Colot's method to be adopted ; as he does likewise when there are several calculi in the bladder : and we are told by Saviard, that, in the case of a child who had two calculi, finding the patient greatly fatigued after the removal of the first, he suffered eight days to elapse before he proceeded to the extraction of the remaining calculus, and the patient, he adds, was perfectly cured †. These authorities all tend to confirm the practi-

* System of Surgery, Part II. sect. v. chap. 141.

† “ Je poussay ensuite pour la seconde fois mon bouton dans la vessie, où je sentis une seconde pierre, que je ne jugeay pas à propos de tirer ce jour là parceque l'enfant étoit trop fatigué. Je le fis panser avec les astringens, les embrocations, et tous les remèdes dont on se sert au premier ap- pareil ; on luy fit le lendemain une petite saignée, et l'on continua pendant huit jours à le panser, avant que je songeasse à lui tirer cette seconde pierre, que je chargeay et tiray ensuite comme la première. . . . Le pansement fut continué, avec beaucoup d'exaétitude, jusqu'à sa parfaite guérison.” — *Vide Nouveau Recueil d'Observations Chirurgicales*. 3vo. Paris, 1702, p. 206.

cability and good effects, in certain cases, of Franco's method.

The great object of M. Louis, that of lessening, by means of the incision, the violent pain the patients experience, may be supported by the authority of several eminent writers on surgery, although they have in general recommended it only when the stone is too large to be extracted. Thus Baron Van Swieten, in his Commentary on the 1427th aphorism of Boerhaave, speaking of the occurrence of a stone in the bladder too large to be extracted, observes, that in such cases nothing more remains to be done than to make an artificial opening in the perinæum, through which the urine may be evacuated. By this means, he adds, "the evil
" may be palliated, though not removed, and
" life will be rendered more tolerable *." The learned Commentator adds, that this method has been tried with a good effect by Douglas, on the authority of *Collet*, a famous French lithotomist. I have no doubt but that for *Collet* we should read *Colot*, as the observation mentioned by Van Swieten, apparently on the au-

* "Leniuntur sic mala, licet non tollantur, redditurque
" vita tolerabilior."

thority of Douglas, is to be found in Colot's work * already referred to.

It appears, however, from a passage in Avicenna, that an opening into the urethra, for the sake of letting off the urine in cases of pain from the stone, was in use many centuries ago. The passage in question, as I find it in a Latin version † of Avicenna, may be thus rendered :

“ When there is difficulty in discharging the
 “ urine, occasioned by a stone in the bladder,
 “ and there is no possibility of extracting the
 “ stone by cutting, on account of some parti-
 “ cular circumstance that prevents it, or the
 “ fears of the patient; in such cases a small
 “ opening must be made in that part which is
 “ between the anus and testicles, and into this
 “ opening a canula introduced, that so death
 “ may be prevented, although life will thereby
 “ not be rendered thoroughly easy.”

* Page 188.

† Tract. I. cap. vi.

VII. *An Account of a remarkable Transposition of the Viscera in the Human Body.* By Matthew Baillie, M. B. *From the Philosophical Transactions, Vol. LXXVIII.; with some Alterations and Additions by the Author.*

To JOHN HUNTER, Esq. F. R. S.

DEAR SIR,

A VERY singular variety having occurred lately in the structure of the human body, I beg leave to communicate an account of it, by your means, to the Royal Society, if you should think it worthy of their notice. It happens by a very uncommon concurrence of circumstances, that while I am naturally led by the ties of affinity to apply to you upon this occasion, I can gratify my pride by thinking it is at the same time to the person who is possessed of the first reputation for his unwearied researches in one of the most extensive, as well as interesting parts of the system of nature.

I am, &c.

M. BAILLIE.

Great Windmill Street,

April 12, 1788.

There

There is nothing which tends more to illustrate the powers and the wisdom of nature than the investigation of the structure of animals. We there find a most wonderful delicacy of mechanism, and exquisitely adapted to a variety of purposes. This, however, is not to be better seen by following nature in her common tract, than by observing her wanderings. In these she often shows more particularly the extent of her powers, and throws light on her ordinary plans. It is such circumstances which give importance or value to the observation of singular phænomena. The variety in animal structure, an account of which I have the honour of presenting to this learned Society, is a complete transposition, in the human subject, of the thoracic and abdominal viscera to the opposite side from what is natural.

I have been at the pains to consult many authors upon this subject, but with very little satisfaction. I shall not enter into a detail of what I have met with in the course of these researches; but shall briefly notice, that when any lusus of this sort is mentioned, it is commonly in a single sentence or two, and the

transposition is not marked as universal*, or it is a change in the situation of some viscus from disease. In short, I have only found this singular *lusus naturæ* described by Cattierus, M. Mery, and M. Daubenton†; but by none of them is the description sufficiently particular. Enough has been said to point out that they had met with exactly the same sort of monstrosity; but some circumstances have been omitted, that I hope will be supplied by the present account,

* The partial transpositions to which I allude are of the heart. — See the Philosophical Transactions for 1740-41, p. 777; Riolan. *Animadvers.* in C. Bahiun, p. 703; *Observata quædam Anatomico-Chirurgico-Medica rariora* a D. C. E. Eschenbach, p. 1; Hoffman *Cardianastrophe*, &c. 4to. Lipsiæ, 1671; *Ephemer. Natur. Curios.* Dec. 1. ann. 2, p. 139. — It is possible that there may also be other cases upon record besides what are here enumerated.

† See Cattieri *Observat.* 17, p. 49, apud Petri Borelli *Centurias* IV.; Mery's paper on this subject in the *Hist. de l'Acad. Royale des Sciences*, Tom. II.; and M. Daubenton's in the *Description du Cabinet du Roi*, Tom. III. p. 204.

It may be observed that the case of Cattierus is mentioned by Th. Bartholin in *centur.* 2, *observat.* 29, p. 219; by Mentelius in the *Epistolæ Gratulatoriæ* apud Joan. Pecqueti *Experimenta Nova Anatomica*; and by Riolanus.

The

count, which I proceed immediately to lay before the Society.

The person who is the subject of this paper was a male, near forty years of age, somewhat above the middle stature, and of a clean active shape. He was brought for dissection, in the common way, to Windmill Street. Upon opening the cavity of the thorax and abdomen, the different situation of the viscera was so striking as immediately to excite the attention of the pupils who were engaged in dissecting it; and Mr. Cruikshank, as well as myself, were very

The case of Mery is related in *Nouveau Recueil d'Observations Chirurgicales* par Monf. Saviard, p. 503, observat. 112; and of the fact described by M. Daubenton, another account, by M. Sue, may be found in the *Memoires des Savans Etrangers*, Tom. I. p. 292.

Since this paper was published I have seen a short account of a transposition of the viscera in a clergyman, about thirty years of age, in the *Philosophical Transactions*, No. 107.

There is also an account of a transposition of the viscera in a boy of eighteen months, given by Caron in a periodical work by M. de Blegny, entitled "*Le Temple d'Esculape, ou le Depositoire des nouvelles Decouvertes*," printed at Paris in 1680. I have not seen the account myself; but it is alluded to in Haller's *Bibliotheca Anatomica*, Tom. I. p. 668, and in Lieutaud's *Historia Anatomico-Medica*, Tom. I. p. 387.

soon informed of the singularity. We were much surprised as well as pleased with the appearance; and I began immediately to examine every part of the change with considerable attention: for this purpose, after desiring a drawing to be made of the appearances as they were found upon opening the body, I next day injected it. The progress of the dissection has furnished various views, which are represented faithfully by drawings exhibiting the appearance of the change of situation in all the individual viscera and vessels *. I shall not enter in my description into unnecessary minutiae: this would render the paper less suited to the Society, would not convey more information to persons thoroughly acquainted with anatomy, and would rather tend to obscure what is more important to those who have not given so much attention to subjects of this nature. It may not be improper to observe, that, besides the transposition in the viscera of this person, there are several peculiarities which sometimes occur. I have taken notice of them in my description, although they are entirely independent of the transposition.

* The drawings are in the possession of the Author.

Description of the Thorax.

The mediastinum, or anterior duplicature of the pleura separating the two cavities of the chest from each other, was found to incline obliquely downwards to the right side fully as much as it does commonly to the left side of the chest. The pericardium, too, inclined obliquely to the right side. On pressing it gently away from the lungs, the phrenic nerves came distinctly into view, in their common situation; but the right phrenic nerve ran more obliquely, and was longer than the left. The lung, upon the right side, was divided by a single oblique fissure into two lobes, having at the same time a deficiency opposite to the apex of the heart; and the lung on the left side was divided into three lobes, exactly contrary to what is found in ordinary cases.

On opening the pericardium, the apex of the heart was found to point to the right, nearly opposite to the sixth rib; and its cavities, as well as large vessels, were completely transposed. What are commonly called the right auricle and ventricle were situated on the left side, and the left auricle and ventricle on the right. The pulmonary artery ascended towards the right side of
the

the chest. The aorta was also directing its arch to the right; and the vena cava superior, as well as inferior, were seen opening into their auricle on the left side of the spine.

On the outside of the pericardium the transposition of the larger vessels was very striking. The longer subclavian vein was passing from the left side obliquely to the right before the branches which are sent off from the arch of the aorta. The left carotid and subclavian arteries were found to arise from the arch of the aorta by one common trunk; the right carotid and subclavian to arise separately.

In the duplicature of the pleura behind, or what may be called the posterior mediastinum, there was a change corresponding to what we have already described. The descending aorta was found passing on the right side of the spine. The œsophagus was before it, inclining more and more to the right towards its lower extremity; and it at length perforated the diaphragm somewhat on the right side of the spine. The vena azygos was on the left side of the spine, opening in the common way into the vena cava superior, which we formerly mentioned to be also transposed in its situation. The thoracic duct was seen in the middle between the descending

scending aorta and the vena azygos, in some places forming a plexus of small branches, in another dividing itself into two branches, which afterwards re-united in a common trunk, and at length climbing up to terminate in the angle between the jugular and subclavian veins on the right side of the body. The recurrent nerve of the par vagum, on the right side, passed round the beginning of the descending aorta, and, on the left, passed round the common trunk of the carotid and subclavian arteries. The large intercostal nerves being exactly under the same circumstances on each side, it was impossible there could be any transposition in them. It appears, then, from the foregoing description, that every thing admitting of such a change was completely transposed in the thorax.

Of the Abdomen.

The liver was situated in the left hypochondriac region, the small lobe being towards the right, and the great lobe in the left side. The ligaments uniting it to the diaphragm corresponded to this change, the right transverse ligament being longer, and the left being shorter than usual. The suspensory ligament could undergo little change, except that of being pushed

to the left side along with the liver. On pressing upwards the liver, so as to exhibit its posterior and under surface, the gall bladder was seen on the left side preserving its proper relative situation to the great lobe of the liver; and the vessels of the portæ were found upon dissection to be transposed, corresponding to the change of circumstances. The hepatic artery was found climbing up obliquely from the right towards the left, before the lobulus Spigelii, and entered at the portæ into the substance of the liver by two or three branches on the right of the other vessels. The ductus communis choledochus was on the left of the other vessels, being formed from the ductus hepaticus and ductus cysticus in the common way, and it passed obliquely downwards on the left, to terminate in the duodenum. What was most remarkable, of which indeed I never saw or heard of an instance before, it terminated in the fore part of the duodenum. The vena portarum passed behind the hepatic artery and ductus communis choledochus, ascending obliquely towards the left side.

The spleen was situated in the right hypochondriac region, adhering to the diaphragm in the common way. What was very remarkable

was, there being three spleens, nearly of the size of a pullet's egg, found adhering to the larger spleen by short adhesions ; besides two other still smaller spleens which were involved in the epiploon at the great end of the stomach. I never saw so many small spleens in any one subject. The pancreas was found on the right side behind the stomach, running obliquely from the spleen to the curvature of the duodenum, and had its duct entering in common with the ductus communis choledochus into the cavity of that intestine. The splenic vessels were passing along the upper edge of the pancreas to the right side, corresponding to the change of situation in the pancreas and spleen.

The stomach was situated on the right side, partly hid by the small lobe of the liver, was passing to the left, and terminating in the pylorus somewhat on the left side of the spine. The duodenum took a most singular course ; it passed to the right side, behind the small end of the stomach ; it then turned upon itself towards the left side ; it afterwards took its proper sweep to the right side, passing behind the superior mesenteric artery and the greater mesaraic vein. The mesentery began to be formed on the right side instead of the left, as in ordinary cases.

The ilium terminated in the great intestine on the left side, and there was in it a diverticulum of considerable size, a lusus not unfrequently occurring. The cæcum was situated on the left psoas magnus and iliacus internus muscles. The transverse arch of the colon passed from the left to the right side of the body; and the sigmoid flexure crossed over the right psoas to get into the cavity of the pelvis.

The kidneys had their vessels transposed, as we shall remark more particularly afterwards. The renal capsules had undergone no change, as no variety could be produced by a transposition.

The aorta passed between the crura of the diaphragm into the cavity of the abdomen, and adhered, in its course, to the spine, on the right side of the vena cava inferior. Its branches were directed in their course, corresponding to the peculiar situation of the viscera. The splenic and coronary arteries were passing to the right side, and the hepatic artery obliquely to the left. The superior and inferior mesenteric arteries were directed to the right side. There was no change in the spermatic arteries; any transposition in the testicles (if such a thing could take place) not being capable of affecting them.

them. The lumbar arteries could also undergo little change, except that the left lumbar arteries must necessarily, from the peculiar situation of the aorta, be the longest. The vena cava inferior perforated the tendinous portion of the diaphragm, and adhered in its course to the spine on the left side of the aorta.

The right emulgent vein was much longer than usual, passing from the right kidney, before the aorta, to terminate in the vena cava inferior; and the left emulgent was much shorter, passing from the left kidney to the vena cava, which was situated on the left side of the spine. The right spermatic vein was found to open into the right emulgent, and the left into the vena cava inferior, about an inch under the left emulgent. The vena portarum was changed from its natural course, passing obliquely upwards to the left side, and its large branches, viz. the vena splenica, mesaraica major and minor, were all directed towards the right side of the spine.

There was no change in the intercostal nerve within the cavity of the abdomen; nor does it seem to be capable of being affected by any transposition of parts. We see, then, that there was a complete transposition of the abdominal viscera,

viscera, each of them preserving its proper relative situation to the others.

I examined the brain, the organs of sense, of generation, the muscles and blood vessels of the extremities, but found nothing in them remarkable. Indeed I had no expectation of it; for all these parts are perfectly independent of thoracic or abdominal viscera; but I did it to satisfy myself and the curiosity of others, who might wish to put such a question, or have such a question arising in their minds.

This person seems to have used his right hand in preference to his left, as is usually the case, which was readily discovered by the greater bulk and hardness of that hand, as well as the greater fleshiness of the arm. It was not to be expected he should be left-handed; but I mention this circumstance too with a view to satisfy a curiosity which I know has been excited in many who have heard of this lusus.

I have been at considerable pains to learn something of the history of this person during life; but the particulars I have heard are applicable only to the circumstances of common men, having no connexion with singularity of structure; and therefore, I think, it would be
abusing

abusing the time of the Society to give any account of them. One thing it may be right to mention is, that the person, while alive, was not conscious of any uncommon situation of his heart; and that his brother, whom I have seen, has his heart pointing to the left side, as in ordinary cases. Indeed there was little reason to expect that we should meet with any thing particular in the account of his life. His health could not be affected by such a change of situation in his viscera; nor could there arise from it any peculiar symptoms of disease. Still less could there be any connexion between such a change and his dispositions or external actions. He might have known that his heart was directed towards the right side; but if we consider how little every person, especially those of the lower class, are attentive to circumstances not very palpable, it was scarcely to be expected he should know it. If I had met with any thing in his life which was at all referable to the singularity of structure, I should have been very glad to have gratified the public curiosity by giving an account of it*.

Every

* Since the above lusus has occurred, I have seen, in the possession of Mr. Payne, Surgeon, a foetus at the full time, with

Every singular phænomenon in animal structure is worth remarking, even if it should not lead immediately to any useful observation; but it becomes more important if it should tend to throw any light upon the principles of nature in the formation of animals. It is reasonable to think that nature should follow some general plan in her operations. There is some effect which she has in view, and she will generally employ the same means to produce it. In the structure of any animal, her view is to form such a combination of parts as to render the animal fitted for certain purposes. She will commonly form the same combination where the same purposes are to be served; or, in other words, there will be the same structure in the same species of animals. The same effect, however, may be produced, without a strict adherence to the employment of the same means, as we find to be the case in all human inventions; and therefore there is no reason why nature should not sometimes deviate from her or-

with the viscera transposed. In the Anatomical Collection of Christ Church, in Oxford, there is a heart transposed that had belonged to a very small fœtus, but the fœtus itself is not preserved.

dinary

dinary plans. Accordingly we find there is much variety in animal structure; but this does not commonly affect the animal functions. Under this restriction, the variety is so great in the appearances of every part of an animal, that it is almost impossible to examine any two animals of the same species without remarking many differences.

In the bony compages of an animal we find little variety in the extremities of bones where there is the apparatus of a joint, because a particular shape is best adapted to a particular kind or latitude of motion. In other parts of the bones, where a difference of features is not material, there is great variety, as in the foramina, depressions, ridges, and sutures of bones.

The same general rule will apply to variety in muscles. The principal object is a certain insertion near a joint, so as to give a determined direction of motion. With respect to such insertions, there is, comparatively speaking, little variety; but there is a great difference in the bodies and connexions of muscles, which have no share in the regulation of the motion.

There is no part of an animal where there is a greater latitude of variety than in the distribution of blood vessels. The reason of it is

very obvious. The only object in the distribution of blood vessels is, to carry blood to every part of the body, and bring it back to the heart. The parts of an animal, in order to be supported, must be visited by successive changes of fresh blood; but it surely cannot be an object of importance whether the blood passes by one route or another. Hence the variety in blood vessels is extremely great. Still, however, there is a method in the deviations of nature, so that they may be marked or noted, the same varieties occurring in different animals.

It cannot be at all important to the function of a viscus whether it be in one mass or in separate portions; the structure being the same, the same action will take place: hence we often find the two kidneys joined together, forming one mass, and not unfrequently two or three spleens besides the common one. Neither can it be important whether a viscus should always be of the same shape, because its functions do not depend on shape, but on structure: we find accordingly, in this particular, much variety.

There are many of the viscera which are connected together in their functions, or by the junction of large blood vessels, in such a way as to require nearly the same relative situation

among themselves. This becomes also necessary in order to preserve the general shape of the animal. Accordingly we find that when any important viscus is changed in its situation, it affects the situation of other viscera requiring in them a corresponding change. We saw in the person who is the subject of this paper, that a change in the situation of the heart and liver was accompanied with a change of situation in the stomach, spleen, pancreas, and, in short, the whole abdominal viscera. This, however, is a great deviation in nature ; for it is nothing less than changing almost the whole vital system in an animal, and therefore it rarely happens.

In such a change, it does not appear that the functions can be affected, as they depend on structure and situation, which are both preserved : hence the person who is the subject of this paper arrived at the age of maturity, and might have continued to have lived to an extreme old age. The human machine might have been constructed in this way generally ; and, under such circumstances, what is now called the natural situation of parts would have been as singular as the present phenomenon.

There appears to be less variety in the nervous system of animals of the same species than in

most parts of the body. There is scarcely any difference in the appearance of the brain, and much less in the distribution of the nerves than of the blood vessels. There is also little variety in the organs of sense ; perhaps the mechanism in both these is nicer, so that a considerable deviation would interfere with their peculiar functions.

The most common great deviations which nature produces in the structure of an animal are various kinds of monstrosity, by which the animal becomes often unfit for continuing its existence. This sort of imperfect formation, so much below the standard of nature's common work, will have a tendency to check the propagation of great varieties, and thereby to preserve an uniformity in the same species of animals.

It has been much agitated whether monstrosities depend on the original formation, or are produced afterwards in the gradual evolution of an animal. This does not appear to be a question of much importance ; nor, perhaps, can it be absolutely determined. But, upon the whole, it is more reasonable to think that the same plan of formation is continued from the beginning,

beginning, than that at any subsequent period there is a change in that plan.

It may be observed, that it is exactly the same creative action which produces the natural structure, or any deviation from it ; for, in cases of deviation, the action is either carried too far, ceases too soon, or is diverted into uncommon channels. This will explain the various kinds of monstrosity from redundancy, deficiency, or transposition of parts.



VIII. *An Account of the Method of making a Wine, called by the Tartars Koumifs; with Observations on its Use in Medicine.* By John Grieve, M. D. F. R. S. Edin. and late Physician to the Russian Army. Vide *Transactions of the Royal Society of Edinburgh*, Vol. I. 4to. Edinburgh, 1788.

THE vinous liquor here described is procured by fermentation from mare's milk ; but although it has for some ages been employed by several tribes of Tartars, Dr. Grieve observes that even in Russia it was with difficulty he could learn the particulars of the method of preparing it.

In

In books he has met with little satisfactory information concerning it. All the writers who mention it agree, it seems, that a vinous liquor from mare's milk is used by some of the Tartar nations under the name of *Koumifs*; but none of them describe the mode of preparing it, or the purposes in œconomy or physic to which it is applicable.

Marcus Paulus Venetus, in a work published so long ago as the thirteenth century *, speaks of it as the common beverage of the Tartars, but makes no mention of the method of preparing it.

Strahlenberg, in his description of the Russian empire †, relates some circumstances of the preparation; but his method, our author observes, if followed, could not be attended with success: for he mentions that the Kalmucks take off the thick substance, which, in consequence of souring, rises to the top of the milk, and employ this in their food, while they use the remaining liquor either for drink or distillation. This, Dr. Grieve farther remarks, is not only contrary to the usage of that people, when

* De Region. Oriental. lib. 1, cap. 57.

† Beschreibung des Russischen Reichs, p. 312.

they wish to obtain a fermented liquor of any strength, but experience, he adds, proves that no perfect fermentation can be produced unless all the parts of the milk be left united in their natural proportion.

Of Gmelin, our author remarks, that, in the account of his tour through Siberia*, he attends more to the Tartar method of distilling a spirit from the wine of milk than to the fermenting process by which that wine is procured.

The account given of Koumifs by Dr. Pallas, in the History of his Travels through some of the Provinces of the Russian Empire†, is allowed by Dr. Grieve to be as circumstantial as could well be expected from a traveller whose object was natural history in general; but he observes at the same time that the principles on which the fermentation depends, as well as the mode of conducting the process, are not sufficiently explained in that work.

After pointing out some erroneous assertions relative to this subject, which occur in the wri-

* *Reisse durch Siberien*, T. I. p. 273.

† *Phys. Reise durch einig. Provintz. des Russisch. Reichs*, T. I. p. 316.

tings of Newman*, Voltelen†, and Macquer‡, our author proceeds to describe a method of preparing Koumifs which is common among the Baschkir Tartars, and which he has adopted in his own practice with success. This process was communicated to him by a Russian Nobleman who resided for some time among these people for the purpose of drinking this liquor, and is as follows :

“ Take of fresh mare’s milk, of one day,
 “ any quantity ; add to it a sixth part of wa-
 “ ter, and pour the mixture into a wooden ves-
 “ sel ; use then, as a ferment, an eighth part
 “ of the sourest cow’s milk that can be got ;
 “ but, at any future preparation, a small por-
 “ tion of old Koumifs will better answer the
 “ purpose of fouring ; cover the vessel with a
 “ thick cloth, and set it in a place of moderate
 “ warmth ; leave it at rest twenty-four hours,
 “ at the end of which time the milk will have
 “ become sour, and a thick substance will be
 “ gathered on the top ; then with a stick, made

* Chem. Exp. T. I. Part 2, p. 18.

† Obs. de lacte humano cum asinino et ovillo comparato,
 P. 54.

‡ Dict. of Chemistry, p. 432.

“ at

“ at the lower end in the manner of a churn-
 “ staff, beat it till the thick substance above
 “ mentioned be blended intimately with the
 “ subjacent fluid. In this situation leave it
 “ again at rest for twenty-four hours more ;
 “ after which pour it into a higher and nar-
 “ rower vessel, resembling a churn, where the
 “ agitation must be repeated, as before, till the
 “ liquor appears to be perfectly homogeneous ;
 “ and in this state it is called *Koumifs* ; of
 “ which the taste ought to be a pleasant mixture
 “ of sweet and sour. Agitation must be em-
 “ ployed every time before it be used.”

To this detail of the process our author has
 added some other points of information he has
 been able to collect relative to this subject.
 Thus by one Tartar, who lived to the south
 east of Orenbourg, he has been told, that, to
 prevent changing the vessel, the milk may be
 put at once into a pretty high and narrow ves-
 sel, and that, in order to accelerate the fermen-
 tation, some warm milk may be added to it,
 and, if necessary, more souring. From another
 Tartar he learned that the process may be much
 shortened by heating the milk before the souring
 is added to it, and as soon as the parts begin to
 separate, and a thick substance to rise to the top,

by agitating it every hour, or oftener. In this way, we are told, he made some in the author's presence in the space of twelve hours. From this person Dr. Grieve learned also, that, among some Tartars, it is common to prepare it in one day during summer, and that with only two or three agitations; but that in winter, when, from a deficiency of mare's milk, they are obliged to add a great proportion of that of cows, more agitation and more time are necessary. He was likewise informed, that, when well secured in close vessels, and kept in a cold place, it may be preserved for three months, or even more, without any injury to its qualities.

The same Tartar said farther, that, instead of employing sour milk to produce the acid fermentation, the same effect might be obtained from a sour paste of rye flour, from the rennet of a lamb's stomach, or, what is more common, from a portion of old Koumiss; and that, in some places, they saved much time by adding the new milk to a quantity of that already fermented, on being mixed with which it very soon undergoes the vinous change.

From this Tartar our author purchased one of the leathern bags which are used by the Kal-mucks for the preparation and carriage of their Koumiss.

Koumifs. This bag was made of a horse's hide undressed, and, by having been smoked, had acquired a great degree of hardness. Its shape was conical, but at the same time somewhat triangular, from being composed of three different pieces set in a circular base of the same hide. It had a dirty appearance, and a very disagreeable smell. The Tartar, on being asked the reason of this, said, "the remains of the old Koumifs were left, in order to supply a ferment to the new milk."

From all the preceding accounts it appears that three things are essential to the vinous fermentation of milk. These are *heat*, *souring*, and *agitation*. Our author remarks, that heat is necessary to every species of fermentation, and souring perhaps not less so, but that the chief art of fermenting milk consists in agitation. In fermenting vegetable juices and infusions, nature, he observes, has no need of the assistance of art; the intestine motion that accompanies the fermentation being sufficient to produce the degree of agitation which seems necessary to keep the parts of the fluid in mutual contact, or to fit them for mutual action; while milk, on the contrary, is no sooner soured than a separation of its parts takes place; the cream rises to the

top, while the cheese either falls to the bottom, or is suspended in the whey. When these parts are brought, however, into close contact with one another, by agitation, and this repeated at proper intervals, a vinous liquor is produced, of the medical virtues of which Dr. Grieve next proceeds to treat.

From the time he first heard of Koumifs he conceived, it seems, an opinion of its importance in the cure of certain diseases. He judged that a preparation of milk, which could not be curdled by the juices of the stomach, while, at the same time, it possessed all its nutritive qualities, with the superaddition of a fermented spirit, might be of essential service in those disorders in which the body is defective either in nourishment or strength.

The case of the above-mentioned Nobleman, who communicated to him the first process, gave him an opportunity of trying how far his conjectures were well founded. The patient was in a state that seemed strongly to indicate the use of such a medicine as Koumifs, and our author accordingly advised him to it.

The patient was twenty-six years of age, and his complaints had arisen from the injudicious treatment of a confirmed lues venerea, for
 3 which

which he had undergone three successive salivations by mercury. He was much emaciated; his face was of a livid yellow colour; his eyes were sunk; he felt a severe pain in his breast, accompanied with a considerable cough and mucous expectoration; his appetite and digestion were greatly impaired; and he had frequent tremblings and faintings. In a word, we are told that his whole appearance was consumptive, that he was beginning to feel the symptoms of hectic fever, and was so weak, that he required assistance to get into the carriage in which he was to be conveyed into Tartary.

After drinking Koumifs six weeks only he returned perfectly free from all the above symptoms, and was become so plump and fresh coloured, that, at first sight, it was with difficulty his friends could recognise him.

It seems that soon after he began to take the Koumifs (which served him both for food and drink) he ceased to be disturbed in his sleep; his nervous and dyspeptic symptoms left him, and he became cheerful; and though he used it to the quantity of a gallon and a half, and sometimes even more, in the twenty-four hours, yet he always drank it with pleasure and without intoxication. His body, during its use, was
regularly

regularly open, and the quantity of his urine much increased.

Besides this instance of the salutary effects of Koumifs, three others are particularly described by the author. The subject of the first of these was a lady who had long laboured under a train of nervous symptoms, by which she was reduced to a state of extreme weakness, and who was restored to health in about a month by the use of Koumifs, which was sent to her in casks, well secured. The second patient was a young gentleman who had all the symptoms of incipient phthisis, for which a diet chiefly of milk had been tried without any signs of recovery. This patient drank Koumifs for about two months only, and that at an unfavourable season, but the consequence was that all his complaints disappeared, and his flesh and strength returned. In the third instance the patient laboured under an abscess in the left side, accompanied with all the appearances of incipient hectic. In this case a cure was obtained in about six weeks by the use of Koumifs, proper chirurgical dressings being at the same time applied to the wound.

There were some other cases in which our author employed Koumifs with the same good effects as in those we have mentioned; but of these,

these, as being less important, he has not thought it necessary to give any particular account. He informs us, however, that all those who drank it agreed in saying, that, “ during its use, they
 “ had little appetite for food ; that they drank
 “ it in very large quantities, not only without
 “ disgust, but with pleasure ; that it rendered
 “ their veins turgid, without producing languor ; that, on the contrary, they soon acquired from it an uncommon degree of
 “ sprightliness and vivacity ; and that even in
 “ cases of some excess it was not followed by
 “ indigestion, head-ach, or any of the symptoms which usually attend the abuse of other
 “ fermented liquors.” To this, he observes, may be added, that the Baschkir Tartars, who, towards the end of winter, are much emaciated, no sooner return in summer to the use of Koumifs than they become strong and fat *.

* Dr. Grieve, in a note to this part of his paper, refers to a description lately published of the Russian Empire, the author of which, speaking of Koumifs, says, “ Elle est fort
 “ nourissante, et peut tenir lieu de tout autre aliment. Les
 “ Baschkirs s’en trouvent tres bien ; elle les rend bienportans
 “ et gais ; elle leur donne de l’embonpoint, et de bonnes
 “ couleurs.” — *Descript. de toutes les Nat. de l’Emp. Russ.*
 T. II. p. 118.

From all these circumstances our author thinks it may be inferred that this wine of mare's milk may be applied to many medicinal purposes. From its mild acid, its vinous spirit, and its oily and mucilaginous qualities, may it not, he asks, be considered as a cooling antiseptic, as an useful stimulant and tonic, or as a valuable article of nourishment? These considerations lead him (but with great diffidence, and in the way of query only) to suggest a trial of it in acute diseases attended with marks of weakness and putridity; in cases of excessive irritability; in dyspepsia; in phthisis; and in all cases of suppuration or ulcer in which the body is threatened with hectic fever.

From the scarcity of mare's milk in this country, inquiries will naturally be made whether other species of milk admit of a similar vinous fermentation, and what proportion of spirit they contain. These, it seems, have never been the object of our author's attention; but he gives us the substance of what he has been able to learn from others respecting that which is the most common, the milk of cows.

Dr. Pallas, in the work already quoted*, says,

* *Phyf. Reise durch verschied. Provintz. des Russisch.-Reichs*, T. I. p. 316.

that

that the Tartars, when mare's milk fails them, prepare a wine from cow's milk ; but that they always prefer Koumifs when it can be got, as it is more agreeable, and contains a greater quantity of spirit, of which it yields, on distillation, one-third part of its whole quantity ; while from the wine of cow's milk, or *airen*, as it is called, only two-ninth parts of spirit are obtained.

This account our author finds confirmed by Oferetzkowsky, who accompanied Lepechin and other Academicians in their travels through Siberia and Tartary, and who published in 1778, at Straßburgh, a Differtation* on the ardent Spirit to be obtained from Cow's Milk. From his experiments it appears that cow's milk may be fermented with, or even without, fouring, provided sufficient time and agitation be employed ; that no spirit could be produced from any one of its constituent parts taken separately, nor from any two of them, unless inasmuch as they were mixed with some part of the third ; that the milk, with all its parts in their natural proportion, was the most productive of it ; that the closer it was kept, or, which is the same thing, the more difficultly the fixed air is allowed

* Specim. inaug. de Spir. Ard. ex lact. Bub.

to escape during the fermentation; (care being taken, however, that we do not endanger the bursting of the vessel) the more spirit is obtained. The same writer farther observes, that it had a sourer smell before than after agitation; that the quantity of spirit was increased by allowing the fermented liquor to repose for some time before distillation; that from six pints of milk, fermented in a close vessel, and thus set to repose, he obtained three ounces of ardent spirit; but that from the same quantity of the same milk, fermented in an open vessel, he could scarcely obtain one ounce.

CATALOGUE OF BOOKS.

1. **A**N Introduction to the Practice of Midwifery. By *Thomas Denman*, M. D. Licentiate in Midwifery of the College of Physicians. Volume the First. 8vo. *Johnson*, London, 1788.

2. Meteorological Account of the Weather at Madras from the 1st of June, 1787, to the 31st of May, 1788. 8vo. Madras, 1788.

3. A Treatise on Female, Nervous, Hysterical, Hypochondriacal, Bilious, Convulsive Diseases; Apoplexy and Palsy; with Thoughts on Madness, Suicide, &c. In which the principal Disorders are explained from anatomical Facts, and the Treatment formed on several new Principles. By *William Rowley*, M. D. Member of the University of Oxford, the Royal College of Physicians, &c. 8vo. *Hookham*, London, 1788.

4. A Treatise on the Prevention of Diseases incidental to Horses from bad Management in regard to Stables, Food, Water, Air, and Exercise. To which are subjoined, Observations on some of the surgical and medical Branches of Farriery. By *John Clark*, Farrier to His Majesty for Scotland. 8vo. *Smellie*, Edinburgh, 1788.

5. A Treatise on the *Materia Medica*. By *William Cullen*, M. D. Professor of the Practice of Physic in the University of Edinburgh; First Physician to His Majesty for Scotland; Fellow of the Royal College of Physicians of Edinburgh; of the Royal Societies of London and of Edinburgh; of the Royal Society of Medicine of Paris; of the Royal College of Physicians of Madrid; of the American Philosophi-

cal Society of Philadelphia; of the Medical Society of Copenhagen; of the Medical Society of Dublin; of the Royal Medical and of the Royal Physico-Medical Societies of Edinburgh. 2 Vols. 4to. *Elliot*, London, 1789.

6. A Letter addressed to Dr. Priestley, Messieurs Cavendish, Lavoisier, and Kirwan, endeavouring to prove that their newly-adopted Opinions of inflammable and dephlogisticated Airs forming Water, and the Acids being compounded of the different Kinds of Air, are fallacious. By *Robert Harrington*, M. D. 8vo. *Faulder*, London, 1789.

7. A short Appendix to Dr. *D. Monro's* Treatise on Medical and Pharmaceutical Chemistry, and the Materia Medica. To which is added, an Answer to the Remarks of the Critical Review for October, 1788, on the First Volume of that Work. 8vo. *Cadell*, London, 1789.

8. Vindication of the Opinions and Facts contained in a Treatise on the Glandular Disease of Barbadoes. By *James Hendy*, M. D. Member of the Edinburgh Royal Medical Society; Physician during the late War to His Majesty's Naval Hospital at Barbadoes; Physician General to the Militia, and one of the
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Physicians to the General Dispensary of the Island. 8vo. *Kearsley*, London, 1789.

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14. Vasorum Lymphaticorum Corporis humani Historia et Ichnographia. Auctore *Paulo Mascagni*, in Regio Senarum Lyceo publico Anatomies Professore. Fol. max. Senis, 1787. c. Tab. æn. xxvii.

15. *Bassiani Carminati*, Phil. et Med. Doct. in Ticinen. Gymnas. Hygien. Therap. Mat. Med. et Chirurg. ac Pharmac. R. Prof. Nosocom. Med. et var. Acad. Sodal. Opuscula Therapeutica. Vol. I. 8vo. Pavia, 1788.

16. *Josephus Gaertner*, M. D. Acad. Imp. Scient. Petrop. Memb. et Reg. Soc. Scient. Lond. Sodal. de Fructibus et Seminibus Plantarum. Accedunt Seminum Centuriæ quinque priores
cum

cum Tabulis æneis lxxix. 4to. Stutgardiæ, 1788.

17. *Traëctatus Botanico-Medicus de Achilleis*; cui accedit *Supplementum generis Tanacetii*. Auctore *Carolo Ludovico Willdenow*, Med. Doct. Societ. Nat. Curios. Halens. Sodal. 8vo. Halæ Magdeburgicæ, 1789.

18. *Quod Cogitant Auctores de Hymene, et de Signis Virginitatis diversis, et quod cogitari potest*. Auctore *J. L. M. Guillemeau*, Nior-tenfi, Dioecesis Pictaviensis. 8vo. Monspelii, 1788.

19. *Maximiliani Stoll, Medicinæ Clinicæ P. p. o. in Universitatē Vindobonensi, Prælectiones in diversos Morbos chronicos, post ejus obitum edidit et præfatus est Jos. Eyerel*. 8vo. Vindobonæ, 1788.

20. *Observatio Medico-practica Febris puerperarum cum manifesta lactis in cavum Abdominis metastasi adjuncta Epicrisi*. Auctore *D. J. G. Zehner*. 4to. Manheim, 1787.

21. *Georg. Rud. Boehmeri, Prolusio quâ Cyani segetum nuper expertæ vires laudantur*. 4to. Lipsiæ, 1787.

22. *Thesaurus pathologico - therapeuticus; exhibens scripta rariora et selectiora auctorum et indigenorum et exterorum, quibus natura ac medela*

medela morborum tam internorum quam externorum illustrantur atque explicantur; quem collegit et edidit D. *Jo. Chr Traug. Schlegel*, Celf. Comit. regn. de Schoenburg Waldenburg Consil. et Archiater, &c. Volum. I. Pars I. 8vo. Lipsiæ, 1789.

23. *Dissertationes Medicæ in Universitate Vindobonensi habitæ ad Morbos chronicos pertinentes et ex Maximiliani Stollii, Medicinæ Clinicæ P. p. o. prælectionibus potissimum conscriptæ.* Edidit et præfatus est *Josephus Eyerel*. Vol. I. 8vo. Viennæ, 1788.

24. *I. G. Gunzii*, Phil. et Med. Doct. &c., de *Cortice Salicis Cortici Peruviano substituendo*, Commentatio. 8vo. Lipsiæ, 1787.

25. *Henrici Callisen Principia Systematis Chirurgiæ hodiernæ.* Pars prior. 8vo. Havniæ, 1788.

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corporis humani intercedit, edita curâ *Jo. Chr: Traugott Schlegel*, Doct. Medic. atque Chir. et Medici apud Longofaliffenses. 8vo. Lipsiæ, 1787.

27. Supplemento alla Memoria * per fervire alla facile e perfetta estinzione del Vajuolo, e di tutti gli altri morbi contagiosi sì acuti, che cronici, eccettuata la Lue Venerea, in tutta l'Europa, e nelle altre Nazioni, presso le quali non nascono endemici, del Sacerdote e Dottore in Filosofia e Medicina D. *Francesco Maria Scuderi* di Viagrandre presso Catania, oggi, per Real ordine, emanato dal suo graziosissimo Sovrano Ferdinando IV. nel dì 21 Settembre 1787, Protomedico dell' Università de' Regi generali Studj della suddetta chiarissima e fedelissima Città di Catania, ed in tutto il Regno di Sicilia, e sue Isole adjacenti. A cui si aggiunge Apparatus Institutionum pathologico - practicarum, a magni Hippocratis doctrina majori ex parte sumptarum. 8vo. Napoli, 1788.

28. Delle Facoltà dell' Oppio nelle Malattie Veneree, nuove ricerche di *Giuseppe Pasta*. 8vo. Bergamo, 1788.

* See Vol. IX. page 217.

29. Effais ou Recueil de Memoires sur plusieurs Points de Mineralogie, avec la description des pieces deposees chez le Roi, la figure, et l'analyse chimique de celles qui sont les plus interessantes, et la Topographie de Moscow ; après un Voyage fait au Nord par ordre du Gouvernement. Par M. *Macquart*, Docteur Regent de la Faculté de Medecine de Paris, Membre de la Société Royale de Medecine, &c. 8vo. Paris, 1789.

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dant de la Société Royale d'Agriculture de Paris, &c. 4to. Montpellier, 1788.

35. Assemblée publique de la Société Royale des Sciences, tenue dans la Grande Salle de l'Hotel de Ville de Montpellier, en presence des Etats de la Province de Languedoc, le 12 Janvier, 1788. 4to. Montpellier, 1788.

36. Histoire de la Société Royale de Médecine. Années 1784 & 1785. Avec les Mémoires de Médecine et de Physique Médicale pour les memes années, tirés des Registres de cette Société. 4to. Paris, 1788.

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38. Hand-

38. Handbuch der Apothekerkunst nach der neuesten Entdeckungen, &c. *i. e.* A Manual of Pharmacy according to the latest Discoveries. By *J. P. Steyrers*, M. D. Vol. I. 8vo. Salzburg, 1787.

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46. Descriptio nervi Ischiadici; Auctore *Joanne Henrico Joerdens*, M. D. Folio. Erlangen, 1788. c. Tab. æneis v.

47. *Ludovici Francisci Maincourt*, Doctoris Medici Andegavenfis, Dissertatio Medico-physica de Sanguineis lymphaticisque, malé polypis dictis, concretionibus, in corde et in vasis, per vitam existentibus. 8vo. Lutetiæ Parisiorum, 1789.

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pora sympathiæ, Dissertationes duæ, Auctore
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49. Vermischte Botanische Abhandlungen;
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 Atrocitate et Periculis, de que advertendis a Me-
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de la Cessation des Regles ; par le celebre praticien de Londres, le Docteur *Fothergill* : Extrait des Observations et Recherches de la Société Medicale de Londres. 8vo. Paris, 1788.

55. Memoire qui a Remporté le Prix, au Jugement de la Faculté de Medecine de Paris, le 29 Decembre, 1785, sur la question proposée en ces termes : — “ Decrire l’ictère des
 “ nouveau-nés, et distinguer les circonstances
 “ où cet ictère exige les secours de l’art, et
 “ celles où il faut tout attendre de la nature ?”
 Par M. *Baumes*, Docteur en Medecine de la Faculté de Montpellier, agrégé au College des Medecins de Nîmes ; Medecin de l’Hospice de Charité de la meme Ville ; Associé Regnicole de la Société Royale de Medecine de Paris, &c. 8vo. Nîmes, 1788.

56. Epitre à Messieurs les Savans et Amateurs en Chimie, pour servir de reponse à un article des Elemens d’Histoire Naturelle et de Chimie de M. *Fourcroy* ; suivie de plusieurs Memoires sur les Operations nouvelles et curieuses en Chimie ; par M. le Baron de *Bornes*. 8vo. Paris, 1787.



THE
L O N D O N
MEDICAL JOURNAL,
FOR THE YEAR 1789,
PART THE THIRD.

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LONDON MEDICAL JOURNAL.

I. *Some Observations on the medicinal Effects of the Lichen Islandicus and Arnica Montana. Communicated in a Letter to Samuel Foote Simmons, M. D. F. R. S., by Alexander Crichton, M. D.*

I HAVE the honour of sending you enclosed some observations, written with a view to ascertain the medicinal qualities of the lichen islandicus and arnica montana, two remedies at present but little known to the medical practitioners of this island.

What principally induces me to trouble you with this account is, that, in a celebrated and justly-admired work on the materia medica, which has lately made its appearance, and in which one might naturally have expected an account of every thing new on the subject, no mention whatever is made of the first of these remedies; and for an account of the second, or arnica montana, the learned author refers his readers entirely to the account given
of

of it by Dr. Collin, of Vienna. But as, in my opinion, Professor Collin has endeavoured to raise too high expectations of this medicine, and has ascribed to it too extensive and general powers, I am desirous to prevent, as much as lays in my power, any disappointment which may be experienced in the use of it, by stating to you the opinions of other physicians concerning the arnica, and relating what I myself have had occasion to witness of its effects.

Of the Lichen Islandicus.

When the lichen islandicus is boiled or infused in water, it yields a very thick mucilage, of a penetrating bitter and somewhat astringent taste; qualities which might induce one *a priori* to suppose it possessed of good medicinal qualities.

In dysentery, in certain species and periods of phthisis pulmonalis and hectic fever, and in that troublesome and obstinate cough which remains after the measles, this remedy has been greatly, and, in my opinion, deservedly extolled, not only by many of the German, but by some of the Swedish and French physicians. At the same time its use even in those countries seems to be far from being general; many-
looking

looking upon it both as a very inefficacious and hurtful medicine. The truth is, the diseases in which this remedy has been so much recommended differ so greatly, not only at different times, but in each individual from the peculiarities of constitution, that some difference in the treatment is absolutely requisite; and medicines which are proper in one case, and in one stage of these diseases, are altogether improper in others. But, unhappily, most of those who have written any thing about the virtues of the lichen islandicus, if we except Dr. Marcus Herz, of Berlin, have been but little accurate in their accounts respecting the species of the diseases in which this remedy has been found useful, or the time best calculated for its administration: hence we may easily account for its inefficacy in the hands of some, and its injurious effects in those of others.

In dysentery there are certain circumstances which certainly forbid the use of the lichen islandicus. Among the principal of these may be mentioned a fixed pain in any part of the abdomen, especially if the pulse at the same time is quick and hard, the skin hot, and the patient thirsty; and indeed it ought never to

be administered where the physician suspects any inflammatory affection; neither should it be exhibited in any case in which, from the appearance of the stools, the uneasiness of the patient, and the frequency of the tormina, it may be supposed that a quantity of hardened feces remains in any part of the tract of the intestinal canal.

The sum of the symptoms which the patients laboured under, whom I either saw or heard of being cured by the lichen islandicus, amounts to the following: — perfectly liquid, frequent, and more or less bloody stools, attended with tenesmus and tormina, sometimes very violent and distressing; a quick, but not a hard pulse, often soft and feeble; great and universal debility; and loss of appetite.

I have seen patients labouring under the greatest complication of these symptoms entirely cured by the lichen; and Dr. Herz, in his Letters addressed to Physicians*, enumerates a number of similar cases also cured by it.

This celebrated physician, who gives an excellent and candid statement of the effects which he has experienced from it, accompanied

* Briefe an Aerzte.

with the history of some of the cases, says, that, from the time when he first used this remedy in dysentery, he has never had occasion to have recourse to any other. — “As soon,” says the Doctor, “as I have sufficiently cleansed the stomach and intestines, I betake myself to the lichen islandicus; only that, according to taste, or other circumstances, I sometimes join a syrup to it, and now and then a little opium.”

In Vienna the lichen islandicus is held in high estimation in the phthisis pulmonalis, a disease exceedingly frequent in that city. During a seven-months stay there, and a pretty constant attendance at the General Hospital, I had frequent opportunities of seeing this remedy tried for the cure of the disease alluded to. I am sorry, however, to be obliged to confess, that it by no means answered the expectation I had formed of it.

From what I have seen, I am fully convinced, in my own mind, that there are only two species of this disease where this sort of lichen promises a cure. The two species I hint at are, the *phthisis hæmoptoica*, and the *phthisis pituitosa* or *mucosa*. In several cases of these I have seen the patients so far get the better of

their complaints as to be dismissed the hospital cured; but whether they remained long so or not I cannot take upon me to say.

In both these species of phthisis the lichen islandicus is inadmissible, should there be a fixed pain in any part of the thorax, increased by a deep inspiration, and attended with a quick and hard pulse. The reason of this will be evident to any one who considers the cause of such symptoms, and the general effects of this lichen.

The cases of phthisis hæmoptoica, which I thought were cured by it, have not been very numerous. In some I have seen it fail, especially in such as seemed strongly predisposed to this disease by their original conformation: but where the rupture of the blood vessels of the lungs seemed to have arisen accidentally from external violence, from exertions, or from passion, and where the wound had run into supuration from neglect, or an injudicious treatment, if the patient was not otherwise much predisposed to the disease, and his strength already not greatly exhausted, the lichen islandicus had always the happiest effect.

The good qualities of the lichen islandicus are more certain and constant in the phthisis
puitosa,

pituitosa, as it is called. I am afraid, however, that in this country we shall find less benefit from this medicine, in consumptive cases, than may by many be expected, as I am confident that, on an average, nine cases out of ten of our consumptions are owing to a scrophulous affection of the lungs. In this species, commonly distinguished by the name of *phthisis tuberculosa*, I have often seen trials made with this remedy, and, I am sorry to add, have as often seen it fail. Dr. Herz, of Berlin, whom I have already spoken of, takes also particular notice of this; but mentions the success he has derived from it in the *phthisis hæmoptoica*, and gives a history of some of the cases to strengthen his assertion. It is on the authority of this gentleman alone that I pretend to recommend the lichen to the attention of your readers in the cough which, now and then, remains so obstinately, for a length of time, after the measles.

The lichen islandicus is commonly given in the form of a decoction; an ounce and a half of the lichen being boiled in a quart of milk. Of this a tea-cupful is directed to be drank frequently in the course of the day. If milk disagrees with the patient's stomach, a simple

decoction of the lichen in water will answer very well. Care ought to be taken that it be boiled over a slow fire, and not longer than a quarter of an hour, as it is apt otherwise to lose some of its qualities.

The lichen seems always to have one evident effect, that of strengthening the powers of digestion, and indeed of the whole system.

In dysentery its peculiar evident effects seemed to be to alleviate the tormina, and that often very quickly; to diminish the frequency of the stools, and to change them to a more natural consistence.

In phthisis its good effects are pointed out by an amelioration of the matter expectorated; by diminishing the frequency of coughing, and rendering it also easier; by diminishing the irritability of the patient; and preventing or gradually moderating the hectic fever.

Of the Arnica Montana.

The arnica montana has a penetrating bitter and somewhat aromatic taste, which is stronger in the flowers than in the leaves, and weakest in the root.

Dr. Collin, of Vienna, in the years 1773 and 1775, endeavoured to recal this plant from
oblivion.

oblivion by the publication of a number of cases, and experiments made with a view to ascertain its qualities*. The result of the cases which he gives us tends to prove the arnica to be a very useful and efficacious remedy in putrid fevers, intermittents, palsies, tremors, and amaurosis.

It is, however, to be much lamented that Dr. Collin, from an over anxiety to stamp a high character on the arnica, seldom informs us of any of the cases but those in which it succeeded.

In putrid fever I am happy to say I can strengthen his assertions, at least as far as my word will have any credit. With Professor Stoll, whose practice I had an opportunity of witnessing for four months previous to his death, the arnica was a favourite remedy in the disease alluded to; and not only with him, but with other physicians of the General Hospital of Vienna, I have seen it succeed wonderfully well. Even in the worst stages, where the pulse has been exceedingly weak, small, and quick, where

* Vide Henr. Joseph. Collin *Observ. circa morbos acutos et chronicos*, Part. IV. Vienn. 1773, et ejusdem libri Part. V. *ibid.* 1775.

innumerable petechiæ have appeared, and even where the patients seemed exhausted by a colliquative diarrhœa, this remedy generally produced the happiest effects. Dr. Stoll, however, gave it in much larger doses than Dr. Collin recommends beginning with.

Effects similar to those just mentioned I had again an opportunity of witnessing last summer, when attending the Clinical Hospital at Göttingen. Professor Fischer, who is physician to that hospital, assured me that he had often experienced the happiest effects from it, both as an antiseptic and tonic remedy. I should be very sorry were it to be understood from what I have said concerning this plant, that I am anxious to stamp a higher value on it, as an antiseptic and tonic remedy, than on any other in common practice. The cases in which I have seen it tried are not numerous enough to authorise my doing so were I inclined. All I can say is, that in this disease I do not recollect to have seen any other medicine necessary when the arnica was freely and properly exhibited.

As to its effects in intermittents, I cannot speak from my own experience: but as it may afford some satisfaction to your readers to know the result of the trials made with it in this disease,

ease, I shall take the liberty of transcribing here such of my notes as relate either to what I have learnt from the conversation of foreign physicians on this subject, or to what I have extracted from their writings.

Dr. Collin, in the fifth part of his *Observations* &c. says he has cured thirty-eight quotidians, forty-six tertians, and fifty-eight quartans, with the arnica. His dose of the extract was about a drachm per diem.

Dr. Sebold, Professor of the Clinical Institution at Prague, assured me, whilst there in September, 1787, that, in the cure of intermittents, after cleansing the primæ viæ, he trusted entirely to the arnica and flowers of chamomile, and that in the many cases which had occurred to him of this disease this method had never disappointed his expectations.

In Jutland this plant is a common domestic remedy in the ague, and held in great esteem*. Dr. Manger says he has frequently experienced the best effects from an infusion of half an handful of the flowers drank two hours before the access of the paroxysm. All this tends, in my

* Vide Gesner's *Entdeckungen in der Arzneiwissenschaft*,
3 B. 2 theil.

opinion, to prove the tonic qualities of the arnica.

It has been much recommended in palsies and tremors; but I only remember to have seen one case of each of these diseases got the better of under the administration of the arnica; and even in these cases the arnica, perhaps, had not the sole merit of the cure: for in the one it was joined to the use of valerian, and in the other to that of camphor. In two or three other similar cases which I saw treated with the arnica, during my stay at Vienna, it failed.

Dr. Collin says he has cured nine cases of amaurosis with it.

Dr. Richter, the celebrated professor of surgery at Gottingen, who has a great deal of practice in diseases of the eyes, says, that he has tried the arnica very often in this disease, but that it did not answer his purpose so well as it seems to have done Professor Collin's, although he confesses it to have been now and then of service*.

Having now stated to you, as concisely as I possibly could, such information as I think may

* Richter's Chirurg. Bibliothek, 2 Band, Gottingen, 1772.

throw some light on the medicinal qualities of the arnica, I shall only add a few words more on the different methods of exhibiting it, and on its apparent effects.

Either the whole plant may be used, or its flowers, or roots, in the form of a powder, decoction, infusion, or extract.

The whole plant is generally used in infusion or decoction, in the proportion of an ounce of it to a pound and a half of water; which quantity may be given, in doses of a cupful, in the course of the day.

Of the flowers two or three drachms daily will, at first, in most cases, be sufficient; although I have seen near an ounce of them taken in the space of twenty-four hours.

The extract made from the whole plant, which, in my opinion, is by far the most elegant and commodious way of exhibiting it, may be given at first to the extent of a drachm *per diem*.

The arnica, especially its flowers, produces often very disagreeable and uneasy sensations to the patient. The chief and most common of these are, a sharp pricking sensation over the whole surface of the body, an uneasy sensation at the region of the stomach, sometimes accom-

panied with cardialgia, and with slight convulsive shocks, resembling those produced by electricity.

Another very curious and pretty constant effect of the arnica is that of its indicating the place where any injury has taken place, from an external cause, by augmenting the pain in the part, should any exist; or by renewing it, should it have only lately quitted the patient.

It may be remarked, that the root seldom produces any of these disagreeable symptoms; whereas the flowers of the arnica seldom fail to do so. When these symptoms do take place, it is always looked upon as a sure sign of the remedy's taking a proper effect; therefore its use ought not to be discontinued on that account. A little of the extract of gentian generally prevents its occasioning the uneasiness at the stomach whilst it co-operates in its effects.

The arnica almost uniformly increases the strength, but not the velocity, of the pulse.

Oxford Court, Cannon Street,

June 23, 1789.

II. *Obser-*

II. *Observations on a Disease consequent to transplanting Teeth.* By Mr. George Spence, Dentist to His Majesty.

THE disease, of which I mean to treat, is that which arises after the transplanting of teeth, and which has, as yet, only appeared (as Mr. Hunter expresses it) in “consequence of two living parts being brought into contact;” for I have never seen or heard that the disease has followed the insertion of a dead tooth: but although, in several instances, such a disease has arisen in consequence of transplanting a living one, yet these are few when compared with the number of teeth transplanted.

Transplanting teeth is by no means a new operation, or restricted to this country. We find it mentioned by Ambrose Paré; and it is practised at this time by the most eminent dentists upon the Continent. Neither the ancients nor the moderns, however, have distinguished any disease as being peculiar to the transplanting what, for distinction’s sake, we will call a living tooth, notwithstanding they have ex-

preffly treated of transplanting the tooth of one living person into the head of another.

In systematic writings we find complaints of this kind classed according to the situation of the parts affected, or a supposed predisponent cause ; hence we find them generically arranged among the dental, gingival, alveolar, or maxillary pains, ulcers, fistulas, &c. and these, again, reduced to different species of rheumatic, scorbutic, scrophulous, or venereal affections, which are always considered as latent in the constitution, and not as being implanted with the tooth.

The symptoms and progress of the disease, so far as I have been able to collect from the instances in which it has occurred to me, have been as follows : —About five or six weeks after the tooth has been transplanted, and apparently well fixed, upon the patient's taking cold, the gum has swelled, become red and painful, and then receded from the tooth ; ulceration has taken place, the teeth have grown loose, and the discharge has become very fœtid : if, before this period, the disease has not been checked by medical treatment, the tooth has dropped out, symptoms of hectic fever have ensued, and blotches have appeared upon the skin. In all

the cases, however, that have fallen under my observation the disease has terminated favourably, and given way to medicine, excepting in one instance, in which the hectic symptoms destroyed the patient.

An exfoliation of the alveolar process generally takes place in this disease; but whether it arises from the teeth having been transplanted, or from the great irritation consequent to the operation, or from any other unfortunate circumstance connected with the teeth, I must acknowledge myself at a loss to determine.

To this concise general view of the appearances and progress of the disease I will now add a more particular account of the symptoms, as they occurred in the different persons who were the unhappy subjects of it, and will also take notice of the methods of treatment. To some of the patients the complaint gave but little trouble, while in others it excited very unpleasant symptoms; and indeed to all it occasioned no small alarm.

In relating the cases I shall arrange them more according to the method of treatment than to the order of time in which they occurred. The first of these cases was under the direction of my father; the others have occurred to me,
in

in the course of twelve years, in my own practice.

C A S E I.

A lady had a tooth transplanted, and five weeks after the operation, having danced and caught cold, she had a fever for six weeks; at the end of which time the disease appeared in the gum. The bicuspid, which had been transplanted, and the tooth next to it, were removed; the alveolar process exfoliated; the ulceration was obstinate; and a node-like swelling appeared upon the leg: but the whole eventually gave way to sea bathing and the internal use of sea water. This case, as well as some of the others which I shall mention, has been published by Mr. Hunter in his work on the venereal disease.

C A S E II.

A young lady, who had had the middle incisor transplanted, caught cold, while in the country, about the sixth week after the operation, and the gum became tumid, red, and painful. Expecting the complaint to go off as a common cold, she did not apply for advice till her return to town, which was in about ten days after. Ulceration had then taken place, and extended
to

to one of the other teeth ; and from the foreign tooth the gum had receded, and the ulcerated surface discharged a foetid matter. The bark was now directed to be used freely, and two or three glasses of red port to be drank at dinner. The diseased part was washed with a strong decoction of bark, and a pledget dipped in it was applied to the gums and teeth. Mr. Hunter saw the disease in this state, and advised the quantity of bark to be increased, the use of wine to be continued, and the three teeth to be removed. The sockets exfoliated, and in about four weeks the patient was perfectly well, and has had no relapse.

C A S E III.

A young lady having had one of the incisors transplanted, it fixed, and did well till about five weeks after the operation; at which time she danced, and caught co'd. In a day or two after this the gum swelled, grew painful, and then became ulcerated. The ulceration was proceeding as in the other case ; but, by the advice of two surgeons of eminence, the tooth having been extracted, and the bark given freely, the gum healed, and the young lady was perfectly restored in a few weeks.

C A S E

C A S E IV.

A young lady had a tooth transplanted, and during the first five weeks the same favourable appearances ensued that have generally attended this operation. The gum then began to ulcerate, and the ulceration increased. A surgeon, who was consulted, advised the use of mercury; but it was not had recourse to, and nothing more was done than extracting the tooth. After this the gum healed as fast as any common ulcer usually does.

C A S E V.

A young lady had two incisores transplanted, and, seemingly, with success till about six weeks after the operation, when an ulceration took place, with the usual symptoms, and attended with great pain. The ulceration, however, spread very slowly.

Her family surgeon, who was consulted, thought the disease venereal, and that it arose from contagion conveyed by the transplanted tooth. Another surgeon was called in, who objected to a mercurial course, and desired that the bark might be used. During the use of the latter remedy the disease was apparently
getting

getting better, though not so fast as the surgeon of the family wished; he therefore had recourse to mercury, and in a few weeks the ulceration was stopped, and the patient appeared to be well. The disease, however, returned again several times, but was finally removed by a perseverance in the use of mercury.

It should be observed, that from the same girl, out of whose head the implanted tooth was taken, another lady had a tooth the day before, and that in that case no ulceration followed. The girl was examined before the operation, and again when the ulceration had begun in the case I have been relating, by three surgeons, who pronounced her free from any disease.

C A S E VI.

A gentleman had two incisores transplanted, and in about five weeks after the operation ulceration took place, and was attended with all the usual symptoms. He was advised to take the Peruvian bark freely, and to apply a strong decoction of it to the ulcerated gum, the discharge from which was very acrid and foetid. This mode of treatment was pursued during three or four weeks, and both the transplanted

teeth were kept in. The gum, however, on being healed, was found to have receded a little. This gentleman had the appearance of being of a scrophulous habit.

C A S E VII.

A gentleman, who was evidently of a scrophulous habit, had three teeth transplanted, and about five weeks after the operation took cold by falling asleep in the open air, when warm and fatigued. Ulceration came on, and proceeded in the manner usual in these cases. At first, recourse was had to the bark; but a physician, who was called in, deeming the case venereal, put him under a course of mercury. There were blotches on the skin, and his eyes were inflamed. He recovered in the course of a few weeks, and his teeth were preserved. I saw him many months after, and he was then perfectly well.

C A S E VIII.

A young lady, who had an incisor transplanted, caught cold in the country about a month afterwards, and ulceration took place in the gum, and spread considerably. I recommended a lotion of tincture of bark and myrrh,
and

and a pledget dipped in it to be applied to the part. A surgeon, who saw her soon after, advised a solution of corrosive sublimate to be applied to the gum; but this, as it gave her pain, was soon discontinued. Another surgeon was then consulted, who did not think the case venereal, and who only directed her to wash her mouth with barley water and tincture of myrrh. As the complaint increased, recourse was had to the Peruvian bark and myrrh, but without any perceptible good effect. The pain and tenderness of the parts prevented her taking food and rest, so that her health was soon greatly impaired. In this state she became a patient of the late Sir William Watson, who has given an account of the case in the *Medical Transactions* *; as hath likewise Mr. Hunter in his *Treatise on the Venereal Disease* †.

The disease grew better while the patient was under a course of mercury, but she died consumptive. Of this case Mr. Hunter remarks, that the quantity of mercury taken was not sufficient to cure such chancres in other parts, or

* Vol. III. page 325. — See also Vol. VII. of this work, page 216.

† Page 391.

venereal sores on the skin ; and even this quantity did not appear to affect the constitution, but went off by the bowels. He expressly says, that, upon the whole, he should think it not venereal ; and even Sir William Watson, who, with others, upon first seeing the disease in its worst stage, thought it venereal, allows that great difficulties (and to him even insurmountable ones) presented themselves in the investigation of the cause ; and he says of the cure, that the mercury never took to the patient's gums, or salivary ducts, in the least, an event which was much to be dreaded. From hence it appears that mercury, if it had taken in the least to the gums, or salivary glands, would have been, in his opinion, a very dangerous remedy ; but as it never affected either, it can hardly be said, in this case, to have produced any specific effect.

I shall now mention a case in which mercury was given, in consequence of venereal infection in the natural way, recently after transplanting. The patient was a gentleman, who had the two front incisores transplanted, and the operation seemed to have succeeded ; but a few weeks after he caught the lues venerea, and went under a mercurial course. A considerable ulceration took place in the gums not only of
the

the transplanted, but also of the two lateral teeth, in consequence of which they all four came out.

On the appearance of any new disease, or of any disease from a new cause, great circumspection is necessary in deciding upon its origin. The fact itself, as proved by the cases I have related, is, that from a living tooth being put into the jaw of another person, in some instances, a disease hath been produced, similar, in some of its symptoms, to the lues venerea, and which has given way either to the removal of the tooth, or to the use of medicines.

Thus in four of the cases we have seen that it gave way after the removal of the tooth, without any mercury being administered :

In two others it yielded to the removal of the tooth, and to the use of mercury :

In one of the cases it yielded to the use of bark, without the removal of the tooth :

And in another case it gave way to mercury, without the removal of the tooth.

From this review of the cases it seems clearly to appear that nothing is so likely to stop the progress of the disease as the removal of the tooth. The other indications of cure will consist in allaying the local irritation, and in strengthening

thening the constitution. Mercury, as we have seen, was had recourse to in some of the cases; but I am inclined to think that in those it acted rather as an alterative than as a specific, for in neither of the cases, considered as a specific, did it appear to have any claim to the cure.

The theories that have been held out, relative to this affection, have been founded either on an opinion that contagion is conveyed in these cases by the tooth, or on the idea of a predisposition to the disease in the system of the patient, which is called forth and excited by the irritation of the tooth.

On the supposition of its originating from contagion, it has been deemed venereal; while, on the other hand, by those who ascribe it to a predisponent cause, it has been rather thought scrophulous. Medical men, who have seen only one instance of the disease, have been of the former, while those who have attended many are of the latter opinion. Without restricting myself to the names assigned to it by either, I shall give my reasons for thinking that it arises from a predisposing cause in the patient, and of course is rendered eventually precarious, as well as all other operations: at the same time I must observe, that it bears as good an aspect as any,
and

and indeed a better one than most others, if the number of successful cases be compared with that of the unsuccessful.

As this subject has been so ably treated by Mr. Hunter, I am happy in availing myself of his opinion; and shall express mine, so far as we agree in opinion, in the language he has made use of: positively confirming, at the same time, his and the other accounts given of the young persons from whom the teeth were taken, that they had not, in appearance, the venereal disease in any of its stages, but were perfectly well.

First, then, I think, with Mr. Hunter, that it does not arise from a venereal taint, because some patients, whose cases were similar to the others, recovered without the use of medicine of any kind, and several without the specific medicine, mercury.

Secondly, As the persons from whom the teeth were taken had no appearance of the disease, it seems strange that it should break out in the receivers, and not in the givers.

Thirdly, I consider it as impossible for parts to have the power of contaminating which have not themselves the diseased action.

Fourthly, The parts contaminating were never known to have been contaminated themselves.

Lastly, The argument that arises from the disease having, in several instances, given way to mercury, will have little force when it is considered that the same remedy has been used with great success in India in cases of hepatitis, and by Dr. Hamilton in peripneumony, &c. and is employed by many practitioners in cutaneous disorders, and likewise in scrophulous affections; in the latter of which the pilula Plummeri, with the external application of mercurius corrosivus ruber to the ulcers, has had the happiest effect.

It is Mr. Hunter's opinion, that if a sore be produced by other means in the sound part of a person affected with the lues, that sore is not venereal, nor the matter poisonous, although formed from the blood *. If, therefore, (supposing this opinion to be well founded) the wound made by extracting a tooth be considered as a recent sore, nothing conveyed by that tooth can be supposed to be contagious, especially when we consider that the person's mouth, gums, and teeth, are to all appearance sound; so that, upon the whole, I am perfectly of opinion with Mr. Hunter, that, whether we consider the ori-

* See his Treatise on the Venereal Disease, page 290.

gin, progress, or cure of the disease, there is no good reason to think it venereal.

I am persuaded that this disease more probably arises from a predisponent cause, operating in consequence of irritation, for the following reasons :

First, In several of the instances a removal of the irritating cause prevented farther mischief ; for the bark and wine that were prescribed seemed to have no farther share in the cure than, as tonics, by preventing and correcting a debility which would have aggravated the disease.

Secondly, The disease generally makes its appearance after the threads have been removed, and the tooth is left to support itself ; and this I think will account, in a great measure, for the equable periods at which the disease has arisen ; and the circumstance of its generally beginning after some violent exercise, such as dancing or taking cold, (which tend to produce an inflammatory affection that will naturally be determined to this weak part) serves considerably to confirm my opinion, that, in persons predisposed to this disease, the disturbance given to the teeth, together with the weakness and irritability of the parts, are to be considered as the remote causes of this complaint.

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K k

Thirdly,

Thirdly, There is a disease that appears very similar to this, which arises naturally, and very often in situations where scrophula is almost endemic ; a low situation, a bad climate, and a poor diet, generally dispose to it, and any accidental occurrence calls it forth. In the fens of Lincolnshire, where scrophula often affects the lower class of people, it appears very commonly in the mouths of children and young people at teething, and shedding the teeth, but most violently at the latter ; at which time, if the loose teeth are not removed, the gum becomes tumid, red, and painful, discharges a foetid matter, and is attended with hectic symptoms, which sometimes terminate fatally.

In these cases the ulceration of the gums is often attended with scrophulous ulcers, in the cure of which a better diet, the use of tonics, of mercury with opiates, and occasionally of sea bathing, have frequently been found successful : but in a case of this kind, which fell under my own observation, the symptoms differed so little from those of the disease produced by the transplanting of teeth, that the complaint was treated in the same manner, and gave way as that disease usually does. The subject of this case was a young gentleman in
London,

London, about four years of age, whose four incisors of the under jaw became loose. A considerable ulceration of the gums took place, accompanied with a very foetid discharge, and the alveolar process was a little exposed.

When I examined the teeth and gums, I was of opinion that nothing could be successfully done while the teeth were in. The father of the child objected to their being drawn, and wished the cure might be attempted without; but after trying various remedies the patient got worse.

In a short time I saw him again, and then it was agreed that the teeth should be taken out. I accordingly drew them: the bark was then given freely, and in a few weeks the four sockets exfoliated, and the patient got well. He was of a scrophulous habit, and was sent to the sea for the purpose of bathing, which proved of great service to him.

This case clearly proves that where there is a predisposition to this disease it may be, and is, brought into action by an original tooth as well as by one taken from another person.

I have now endeavoured to lay before the reader all that has fallen under my observation relative to the symptoms, progress, and cure of a dis-

ease which I cannot consider as a new one, notwithstanding one of its proximate causes has not been frequently attended to, or been often known to produce it. I do not speak the language of a person whose experience has placed his opinion beyond the reach of doubt; but, after laying all circumstances together, I cannot help thinking it of as much consequence, if not more, to the success of transplanting teeth, that the constitution of the patient should be free from hereditary or latent disease, as that the tooth received should be sound.

Pall Mall,
July 7th, 1789.

III. *Remarks on febrile Contagion.* By Mr. James Lucas, one of the Surgeons of the General Infirmary at Leeds, and Member of the Corporation of Surgeons in London.

FROM a strict examination of registers, as well as from common observation, it is evident that no disease whatever, the plague excepted, has proved so destructive to this island as the small-pox: and, from an idea that infection

tion diffuses itself through the air of a town or country, attempts to check contagious diseases have been not only much neglected, but even discouraged. It has been proved, however, by many satisfactory observations, that contagion is more frequently spread by contact with the patient, or infected apparel, than by a morbid state of the air; and hardly any one, perhaps, would venture to deny the importance of a plan for stopping the progress of febrile infection, although the neglect of promoting such a plan is very obvious: so true it is that the most valuable discoveries, instead of being received with gratitude, have often the prejudices of mankind, for a length of time, to combat before they become generally adopted.

There is no febrile contagion so well understood as that of the small-pox, nor any country where the means of preventing its fatality have been more successfully employed than in this island. However sanguine it may appear, I have, with my worthy and intelligent friend Dr. Haygarth, little doubt that the disorder might be so far eradicated as never to prevail, except when imported from some other country. Such power of managing one febrile infection might lead us, by equal caution, to check the ra-

vages of other disorders, which spread their baneful influence without controul. Infectious fevers, by being chiefly confined to the poorer class, often prevail for a length of time without exciting much alarm, or without their fatality being attended to ; but should a few in higher rank receive the infection, then the disorder is described in most exaggerated terms. Yet it is almost impossible to prevent something being brought, or some person coming from an infected house, when such complaints are very prevalent, so that the danger becomes general. Our utmost endeavours, therefore, should be exerted to prevent the spreading of such fatal diseases, especially as the contagion may often be more under management than has been generally supposed.

Unable to succeed in promoting measures similar to the benevolent plan which has for several years been established at Chester, I have contented myself with occasionally practising Dr. Haygarth's rules ; and have also recommended the practice to my acquaintance, should the small-pox become prevalent in their neighbourhood. Knowing that one of the gentlemen alluded to, who is a clergyman, had not only taken much pains to establish such a plan, but had received from it much satisfaction, I requested

quested him to transmit to me a narrative of his proceedings, which I shall beg leave here to insert.

“ In the month of May, 1786, I was informed by the woman who nursed a child of mine, that the small-pox had just begun to appear in a poor family not far distant from her house. I desired the family neither to associate with their neighbours, nor to permit any one who had not had the small-pox to come near them ; and I also called upon every family in the village to request that they would be equally careful not to have any communication with the infected house. My directions were as punctually followed as I could have expected ; but the disorder proved fatal to one out of two children in that family. A child resident under the same roof, and a young girl who imprudently visited the infected corpse, were the only persons who caught the infection, which I attribute to the precautions used.

“ In October, 1787, I was informed that a child had been a day or two before brought from a distant village extremely ill with the small-pox. By an equal attention to Dr. Haygarth’s instructions, every person escaped
“ the

“ the contagion, except a little child in the
 “ same habitation, although it was a public
 “ house, and in the center of the village. In
 “ the beginning of December following I heard
 “ that the small-pox was very rife in a neigh-
 “ bouring town, as well as in some adjacent
 “ villages; to one of which I was told a pa-
 “ rishioner of mine was gone to nurse her
 “ grandson, who was dangerously ill with the
 “ small-pox. I was much alarmed lest the dis-
 “ order should be brought amongst us, and
 “ thereby defeat a general inoculation, which I
 “ intended to offer the ensuing spring.

“ Soon after I was informed that the boy was
 “ dead, and that his nurse was expected home,
 “ where there were three children who had not
 “ yet had the small-pox, and who were also in-
 “ tended to partake of the proposed inocula-
 “ tion. I objected to any of the family con-
 “ veying my instructions to the place where the
 “ disorder prevailed, although I found them
 “ desirous of using every precaution; but I re-
 “ quested that the nurse should, upon her re-
 “ turn, put off the cloaths she might then wear,
 “ at a relation's house, where there was no per-
 “ son capable of being infected; that her linen
 “ should be cautiously washed; and the rest of
 “ her

“ her apparel fumigated, and exposed to the
 “ air. By all these precautions being cheerfully
 “ complied with, I had the satisfaction to find
 “ that no one caught the infection.

“ In the month of March we were again dis-
 “ tressed by a neighbour's child being brought
 “ from a distant school with a very malignant
 “ kind of small-pox, which soon proved mor-
 “ tal; yet, except two children in the same
 “ family, every one escaped being infected,
 “ although a person had taken his two children
 “ into a room where one of the patients was
 “ with a view for them to take the disorder.
 “ From the information you had given me, I
 “ was in hopes the patient was not so far ad-
 “ vanced in the disease as to communicate in-
 “ fection, which proved to be the case, and
 “ the young folks were inoculated a few weeks
 “ after.

“ I had no sooner taken down the names of
 “ such children in the village as offered for ino-
 “ culation, than I was requested by several per-
 “ sons to extend the same privilege throughout
 “ the parish. As such a plan exceeded my in-
 “ tended limits, I acquainted a noble Lord
 “ with my proceedings, who immediately ap-
 “ proved what had been done, and, in the most
 Vol. X. PART III. L I “ polite

“ polite manner, requested that he might be al-
 “ lowed to be at the sole expence of executing
 “ a scheme which every family to whom he had
 “ applied had, not many years before, peremp-
 “ torily refused.

“ Notwithstanding the unfavourable appea-
 “ rance of some of the children, including a
 “ few private patients, near eighty were inocu-
 “ lated, without even any apparent danger;
 “ whilst two, out of five, who caught the na-
 “ tural infection died. As I had three of my
 “ own children inoculated by the gentleman
 “ who undertook the general inoculation, and
 “ at the same time, I became not a little anxi-
 “ ous that no want of success should happen
 “ from any failure in enforcing the necessary
 “ directions. Experience demonstrated the ad-
 “ vantage of some person exerting himself in
 “ admonition as well as caution. I cannot too
 “ strongly solicit a similar attention in the clergy
 “ or principal persons of either town or coun-
 “ try, being fully persuaded that if such a mode
 “ was generally adopted the most happy conse-
 “ quences would ensue; the lives and future
 “ health of the rising generation would be
 “ greatly preserved; the malignant effects of
 “ the disease would be so far moderated as to
 “ render

“ render it as little dreaded as other complaints ;
 “ if even hopes might not be entertained of
 “ eradicating it from our island.”

This gentleman, in whose relation the greatest confidence may be placed, having no idea of a corpse being likely to retain infection, at first failed to extend his admonitions so far ; otherwise, in all probability, one, out of the only two at that time infected, might have escaped. In this case the corpse remained in the same room as before death ; therefore it is as probable the infection might have been taken from approaching some part of the cloaths, which are allowed to be more contagious than the body ; and hence arises the necessity of using means to prevent future infection from what has been used about a patient in the small-pox.

When we reflect on the circumstance of the disease having broken out not only in the center of the village, but also in a house much frequented, the success of his second attempt is as satisfactory as the benevolent author of the preventive means could have wished. In a former letter, from the same Clergyman, he told me that he met with a disappointment at this time, as he had expected that his being able to point out the good effects of his first attempt, would have

been a sufficient argument with his parishioners to have produced a future cheerful compliance with his regulations; but finding this not to be the case, he had recourse to the reminding them of the loss that must be sustained by parents who, at that season of the year, should be detained from the harvest to nurse their children in the small-pox. This argument was no sooner made use of than universally attended to by a satisfactory compliance. His diligence a few months after not only proves his full persuasion of the advantage, but also the power of checking contagion from being communicated, under very unpromising circumstances. It also appears that his practice had a most unexpected and happy consequence in disposing persons, hitherto inimical to an improved method, to become earnest petitioners for its benefits. It may be remarked, that not one of the families would previously assent to a general inoculation, although afterwards such a salutary scheme met with universal approbation. A strong proof is also exhibited of the great utility arising from occasional general inoculation, both in point of additional security, and also in not communicating natural infection, as no one was found to have caught the disorder from any of the inoculated patients.

I have

I have endeavoured to establish in this town a plan for preventing the spreading of the small-pox, and also other febrile contagion; but although I obtained a promise of several contributions, yet I could not procure the necessary assistance and support for carrying it into execution. When I have been called to a patient in the natural small-pox, I have endeavoured to trace the introduction of the disease, and also to inculcate the preventive measures. In one instance I found that the disorder had been brought by a vagrant, and had been communicated to three families in the same street: by calling upon such families as seemed most exposed, and using every exertion in my power, a total check to the progress of infection, as far as I could learn, was the consequence. Could I have spared time, I wished to have proposed an occasional inoculation, as the complaint was confined to one street. Although equally good effects from pursuing the preventive means, or from occasional general inoculation, might not be experienced in populous towns as in villages, yet the establishment at Chester fully proves that the following year constantly exceeded the preceding in rendering the plan more easily executed.

The result of two general inoculations in
Leeds

Leeds* has been, that the small-pox has since been less frequent and less fatal; its introduction might more easily be traced, and the poorer class seem to have adopted a more advantageous method of treating the natural distemper.

The possibility of carrying Dr. Haygarth's rules into execution in villages requires so few exertions, and is evidently attended with such happy consequences, as to afford little doubt but the communication of the preceding narrative will have its due influence. There are

* One of these took place in the year 1781.

The number of inhabitants in Leeds, in that year, was 17,117; of whom 7475^c (males and females) were under twenty years of age.

In the space of six months, in that year, 462 { persons had
the small-pox.

Of these recovered — — — 332

—— died — — — 130

In the next six months were inoculated — 385

Of these recovered — — — — 381

—— died — — — — 4

The number of these who were still uninfected was found, on a survey, to be 700.

Two of the four, who died, evidently appeared, from the early commencement of the eruptive fever, to have received the natural infection previously to their being inoculated.

The general inoculation, so far from spreading the disorder, appeared to put an immediate check to its progress.

bountiful

bountiful persons in every place, who liberally dispense assistance to the indisposed and needy; and those who are accustomed to such visits would seldom fail to gain early intelligence of the small-pox, and any dictates of theirs would be scrupulously observed from the best of motives, gratitude and affection. The experience and success of villages, in stopping the progress of infectious disorders, would tend to encourage societies being formed in populous towns for the same laudable purpose.

In the year 1779 I addressed a letter to the gentlemen who had the management of the poor in this town, recommending to them, in as strong terms as I could, a house of reception for such as might be seized with infectious fever, and require assistance from the town. I was led to this step from having visited several patients who laboured under a malignant fever, and from observing that the same contagion continued for many months; that eighty persons died of the disorder in one year; that many who struggled through the disease died of other lingering complaints; that in two courts, or yards, forty persons were affected with the fever; and that some families had received ten shillings a week from the poor assessment; that
such

such a scheme appeared likely to check the malignant tendency of the disease, and at the same time to be more economical than supporting such paupers at their own houses, where no expence could afford comfort, or that preservation which might be expected from a well-regulated temporary hospital, which might at that time have been almost entirely supplied with furniture and attendants from the poor house. At the same time I recommended, that, by way of ascertaining the expence of supporting families afflicted with fever, the letter F should be placed to every sum so disposed of.

To enumerate the distresses of families afflicted with fever, that have fallen under my own notice, would far exceed the limits necessary to be observed in the present paper; but I cannot avoid observing, that I have met with instances where additional sufferings have been owing to the patients being inmates, and therefore fearful of applying for relief lest they should be removed; and it appears to me that the poor laws which relate to such removals particularly require some regulation.

Although the plan I recommended was, without any trial, rejected, lest some additional expence should be incurred, I am fully persuaded

that such a house would be of as real use as an Infirmary, Dispensary, or Asylum, and if enforced by law, under proper regulations, would considerably reduce assessments for the poor.

A Dispensary has, in many places, been instituted for the relief of patients whose complaints are inadmissible at hospitals; but, unless a house is annexed to it for the purpose of taking in patients labouring under febrile infectious disorders, it does not answer well the purpose intended. If servants are seized with a malignant fever, they are often sent home to a crowded habitation, where they not only endure much for want of a more proper asylum, but also propagate the disorder, and produce great distress to all around them. In this case it may be said that the law requires a master to provide a cure for his hired servant, and therefore such servant is not an object of charity; but, unless some other motive induces a master's attention to his servant, little consolation, under such affliction, is to be expected. It may be said that few persons would be disposed to prefer such a receptacle to their own home. The same objection has arisen at the institution of all such charities; but it is well known that their good regulations

and advantages have in a short time conquered all such vulgar caprice.

Medical men would be the most useful house visitors, and would amply compensate the difficulty of procuring the attendance of other trustees. In such towns as have an Inspector, he would be the proper person to give notice of any prevailing infectious disorder; and when the benefits of a house of reception were once experienced, the application from the distressed family would generally supersede his discovery.

An exact account of the expences of fever at home and at this temporary hospital should be preserved for public satisfaction.

By publishing a report of the proceedings and present state of houses of reception, contributions would be obtained, and similar plans promoted in other places. I cannot help observing, that no charitable institution whatever ought to be managed without the trustees being occasionally under a legal obligation to report publicly the intention of the donors, and the several purposes for which the money has been expended, as well as the balance in hand. It is to a neglect of this sort that we may attribute the abuse and decline of many ancient charitable institutions, and the commencement of new ones,

whose progress depends upon their public reports. When the late act of Parliament for inquiring into charities was made, it would certainly have been, in many respects, more beneficial if it had rendered a publication of the state of each charity necessary; and it is to be hoped that such an amendment will in future call the attention of our Legislature.

As infectious disorders are, of all others, the most fatal, and all ranks of people are acquainted with the names of prevailing distempers, an especial accuracy in registering burials, of marking those that have died of such complaints, is of far greater consequence than an attention to chronic disorders.

The construction of a house of reception, as well as the requisite means of prevention and management, may be collected from a variety of authors: amongst which Dr. Lind on fever and infection; Dr. Haygarth on the prevention of the spreading of the small-pox; Mr. Howard's different publications; Sir George Paul's work; and Mr. Day's account of the contagion at Maidstone; are highly worthy of notice.

As it appears clear that the spreading of the small-pox is capable of being checked; that

general inoculations may be very advantageously conducted even at the houses of the patients, (although it must be allowed that a house for the purpose would be preferable); as well as that great distress arises from febrile contagion being left uncontrouled; and that it is no more in the power of medical practitioners than others to promote such benevolent schemes; but, on the contrary, that they have often the undeserved odium of wishing to try experiments; it is to be hoped that at least their demonstrating the benefits that may be expected will be sufficient to induce those who have leisure, and ability, to exert themselves in promoting such laudable schemes. The best proof of the efficacy of any plan is the success with which it is attended; but this is a subject in which “multum adhuc restat operæ, multumque restabit.”

Leeds,

July 23, 1789.

IV. *Cafe.*

IV. *Case of a fractured Scull unsuccessfully treated.*

By Mr. John Grimston, Surgeon at Ripon.

Communicated to Dr. Simmons by Mr. Lucas,

Surgeon at Leeds.

ON the 13th of October, 1788, T. Wilson, a boy four years old, was knocked down by the heel of a horse, and wounded on the right side of his head. By enlarging the wound, I discovered a fracture of the right parietal bone, crossing the coronal suture and extending to the frontal bone. The fracture, which was three inches and a quarter in length, and an inch and a half in breadth, was attended with considerable depression.

By the immediate application of the trephine I was enabled to remove all the depressed pieces of bone, which I found had wounded the meninges, so as to occasion portions of the brain to be forced out of the wound.

Such diet and evacuations as were occasionally indicated, were strictly enjoined, by which means pain and fever were, in a great measure, prevented.

A few days after the operation the aperture in the bones was filled with a fungous substance,

stance, of rapid growth, which was gradually reduced by a solution of blue vitriol and pressure; and for a month or six weeks the health of the patient and the appearance of the wound afforded the greatest prospect of recovery.

In the early part of December there again appeared, in the anterior part of the fracture, a hard tumour, of about the size of a pea, which increased greatly, notwithstanding various attempts to restrain it were used, both by pressure and caustics, as recommended by different authors*. I was therefore induced to remove it (as near its base as possible) by ligature, which was effected with hardly any pain to the patient; and then the compression was assiduously repeated.

In the beginning of February, 1789, I first observed, that, when my patient laughed, his mouth was drawn to the right side; but after the discharge of even a small quantity of pus, from any part of the opening in the bones, this affection constantly disappeared.

On the 23d of February, after he had eaten his dinner, and been playing with his usual cheerfulness, he began suddenly to complain of

* Gooch, Warner, Bell, &c.

sickness,

sickness, which was succeeded by vomiting and fever, (from which he had continued hitherto free); his left arm became convulsed; his mouth and eyes were seized with almost perpetual involuntary motions, yet the pupils of his eyes were not uncommonly dilated, nor did his sight seem impaired; but he was totally insensible.

As it was suspected that these symptoms might arise from a detention of matter within or under the fungous eminence, which had again protruded as much as ever, a deep incision was made through the tumour until about an ounce of pus was evacuated; after which an evident abatement of the symptoms took place, but within an hour they returned with increased violence.

By means of the application of leeches, and the use of cathartics occasionally, we so far succeeded, that the symptoms of pressure on the brain returned only at intervals, and were never violent until the 11th of March. On that day he became insensible for an hour, and Dr. Harrison, a physician of this town, having been consulted, he agreed with me in opinion that a similar attempt should be made as before

to discharge any matter that might be collected within the scull.

A large quantity of colourless fluid was accordingly evacuated, and this discharge afforded considerable relief to the patient. On the following day the whole of the prominence was removed by incision, but no more fluid appeared to be confined by it. The texture of the protruding substance varied much; at one time resembling the brain, at another cartilage, or steatoma.

After this the tumour soon began to rise again, and increased with the same rapidity as before, nor would it bear much pressure. Vomiting, with a variety of spasmodic affections, especially a rigidity of the neck, to which the patient had not before been subject, occurred now very frequently.

Although no fluid could be discharged from the tumour, which became gradually flaccid, and much diminished, yet the symptoms so far continued as to reduce him quickly, and on the 31st of March he died.

On examining the brain after death, it appeared that two wounds in the dura mater, inflicted at the time of the accident, continued open, and that the tumour had its origin from
that

that membrane, to which it inseparably adhered. An empty cavity, large enough to have contained seven or eight ounces of fluid, had been formed by the pressure of the tumour. As every other part of the brain seemed to be perfectly sound, the death of the patient might, I think, fairly be attributed to this pressure upon the brain.

The continuance of the disease without alarming symptoms; the prospect we so long had of the patient's recovery; the resemblance of the symptoms he laboured under to those produced by paralytic affections; and lastly, the inefficacy of the means employed for suppressing the fungus, are all of them circumstances that appear to merit attention.

Perhaps there are no cases attended with so much uncertainty in their event as those which arise from injury done to the contents of the cranium; and hence it is difficult to ascertain the time when danger is over, or even when the utmost caution in the treatment of the patient may be relaxed.

The sudden and violent manner in which this little patient was seized after a full repast, seemed to resemble much what happens in pa-

ralfis, and may perhaps lead to a farther investigation of the causes of that disease.

With respect to our endeavours to suppress the fungus, I cannot avoid having my doubts whether caustic applications answer in such cases; or whether even pressure does good, unless applied early, and continued for some time; especially as these tumours often subside of themselves.

The good effects, however, of compressing a threatening protuberance are founded upon the best authority, and I have no doubt have been fully experienced in many cases.

The treatment of this fungous substance seems of more importance than many authors have imagined, as to the failure of its suppression may be attributed the death of my patient.

It was in agitation to have repeated the application of the trephine at the posterior part of the fracture, as from that part the discharge seemed to arise; but I am inclined to think that a repetition of the operation there would have answered but little purpose, as the disease appeared to be confined to the anterior part.

The unpleasing task of describing a failure in practice has perhaps deterred many from

communicating facts which might have tended to throw light not only on the grounds of the failure, but also on the cause of the symptoms and on the means of future success.

“ It is to be wished,” observe the learned Editors of the *Medical Transactions**, “ that
 “ writers would not confine themselves to re-
 “ late only their successful practice. A phy-
 “ sician of great experience might write a very
 “ useful paper if he would have the courage
 “ to give an account of such methods of cure
 “ only as he had found to be ineffectual or
 “ hurtful.”

V. *Some Account of the Tanjore Antidotes for the Bite of a mad Dog; and also for the Bite of venomous Serpents.*

HAVING been favoured with copies of several papers from the East Indies relative to some supposed antidotes for the bite of mad dogs, and of venomous serpents; which have been deemed of sufficient importance to

* See the advertisement prefixed to their second volume.

merit the attention of Government at Madrafs, we think it right to give some account of them in this work.

The papers in question consist of copies of letters from the Secretary of the Governor and Council at Madrafs, addressed to Dr. James Anderson, Physician General, and to the other members of the Hospital Board at that place, and dated in September and October, 1788; together with extracts from the minutes of the Hospital Board, dated in September and November, 1788; and directions for preparing and administering the remedy for the bite of a mad dog, and likewise the snake pills.

From these papers we learn that his Excellency the Governor of Madrafs, having been informed that Samoo-Vell, a native of Tanjore, was in possession of a composition which had the reputation of being efficacious in the prevention of hydrophobia, and of another called snake pills, with which he was said to cure persons bit by venomous serpents, very humanely directed him to be sent to Madrafs for the purpose of having the merits of these remedies ascertained by the members of the Hospital Board.

It

It appears that the principal and indeed the only active ingredient of the remedy for the prevention of hydrophobia is the dried leaf of the *Datura Stramonium*, or thorn apple, given three days successively in a dose of three drachms and a half, which it seems is sufficient in a few hours to excite intoxication. About three hours after its exhibition the patient is directed to drink liberally of a decoction of rice; and at night cold water is to be poured on his head. On the fourth and fifth days he is to observe a strict regimen, and on the sixth is to return to his usual mode of living. — No particular instances are related in which this remedy has been tried; and indeed as a prophylactic in these melancholy cases it has, we fear, no better claim to our confidence than the internal remedies employed on similar occasions in Europe.

In the minutes of the Hospital Board we find Dr. Anderson, the Physician General, very prudently pointing out the dangerous properties of the thorn apple, the leaves of which, he observes, are, in India, commonly rubbed on the inside of the still and pots for toddy, to render that liquor more intoxicating; and “the seeds
“ of one apple,” he adds, “are sufficient for
“ those

“ those who perpetrate self murder, (which is
 “ too frequently the consequence of family dis-
 “ sensions in India) to induce immediate apo-
 “ plexy, and death in five or six hours.”

The other remedy, or snake pill, as it is called, is composed of

- “ The roots of Velli-navi,
- “ and Neri-visham ;
- “ the kernels of Ner-valum ;
- “ white Arsenic ;
- “ Pepper ;
- “ and quicksilver ; of each equal parts.”

Of the first three of these ingredients, which are procured from the Malabar Coast, Samoo Vell could give no satisfactory account ; but it seems that the roots of Velli-navi and Neri-visham are poisonous, and that the kernel of the Ner-valum is a violent drastic purgative.

In preparing these pills the quicksilver is directed to be rubbed with the juice of the *Asclepias Gigantea* Linn. till the globules are extinguished. The arsenic (previously levigated) and the other ingredients, reduced to a powder, are then to be added, and the whole beat up with the juice just now mentioned to a consistence fit to be divided into pills, which are to weigh about six grains each.

After

After dilating the wound, one, and in some cases two, of these pills are directed to be given, according to the urgency of the symptoms, and repeated at the end of a quarter or half an hour if the symptoms do not then begin to subside.

From the minutes of the Hospital Board it would seem that Mr. Duffin, a member of that Board, and Head Surgeon at the Presidency of Madraſs, entertains a very favourable opinion of this medicine, the formula of which he procured through the medium of the Reverend Mr. Swartz, a Danish miſſionary, during his reſidence at Vellore.

The firſt trial he made of it was in the caſe of a Malabar woman, who had been bit in the leg by a Cobra de Capella, or hooded ſnake, and whoſe recovery Mr. Duffin aſcribes to the effect of this medicine ; but as in this caſe it was not adminiſtered till ten hours after the bite, and eight hours more elapſed before the ſymptoms began to abate, it may perhaps be doubted whether the recovery was not owing to the inſufficiency of the poiſon to deſtroy life, rather than to any ſpecific operation of the remedy employed to counteract it.

Of the viper, it has been obſerved by Abbé Fontana, that, from the quantity of its virus requiſite

quisite to produce death in different animals, it is extremely doubtful whether it ever proves fatal to the human species; and the same celebrated writer has collected a few instances, from authors, which render it probable that even the bite of a rattle snake is not always fatal to man *.

The subject of Mr. Duffin's second trial of this medicine was a soldier, who had been bit in one of his fingers by a small brown snake, and had applied a ligature around the finger above the wound. One pill was administered about a quarter of an hour after the bite; and, upon the ligature's being then loosened, the patient complained of a violent pain that extended upwards to his shoulder.

At the end of three hours, as the pain did not abate, and the medicine had produced no sensible effect, a second pill was administered. The symptoms were now more distressing, and the patient became delirious and was affected with spasms.

In this alarming state a third pill was given; this was succeeded by a violent vomiting and

* See his *Traité sur le Venin de la Vipere*, Part III.; and the fifth volume of this Journal, pages 13 and 14.

purgings :

purging; and the next morning, when Mr. Duffin saw the patient, he was free from pain, and complained only of great weakness. On each of the two following days he took one pill, and on the fourth day was able to return to his duty.

One circumstance, which seems to be a material one, must not be omitted to be mentioned, and that is the local treatment; for the wound, it seems, both in this and the preceding case, was freely dilated, and dressed with mercurial ointment.

Since these two cases upwards of fifty others, of persons bit by different kinds of snakes, have occurred, to Mr. Duffin, in which he has administered these pills; but as none of these cases were attended with dangerous symptoms, he thinks it probable that many of the snakes were not venomous. The pills, he observes, generally occasioned a nausea and purging; but seldom operated with violence.

This, however, does not accord with the sentiments of another member of the Hospital Board, Dr. Anderson, on this subject, who declares he has been “credibly informed that the
“exhibition of the snake pills has been attend-
“ed with burning pain of the stomach and
VOL. X. PART III. O o “bowels,

“ bowels, violent vomiting, purging, and, in
 “ some cases, even with death, as might be ex-
 “ pected from the arsenic they contain.”

Dr. Anderson farther observes, that two thirds
 of the snakes in the East Indies are not veno-
 mous*; and “ if these pills,” says he, “ are
 “ administered to all who are bit, three persons
 “ must run the risk of their lives under the idea
 “ of saving one by a dose of arsenic.”

“ If the part,” he adds, “ is cut out within
 “ a quarter of an hour after the bite of our
 “ most venomous snakes, and a ligature is
 “ made above the wound, no ill consequence
 “ ensues; and even when this has been neg-
 “ lected, and giddiness, the first morbid symp-
 “ tom, has occurred, the life of the patient has
 “ been saved by supporting the vis vitæ with

* Of one hundred and thirty-one species of serpents enu-
 merated by Linnaeus, in his *Système Naturel*, only twenty-
 three are marked as venomous, which is not much more than
 one in six; and Dr. Gray, it seems, has examined one hun-
 dred and fifty-four species of serpents, of which number only
 twenty-six appeared to be venomous.—See an ingenious paper
 on this subject, by the latter, in the *Philosophical Transac-*
tions, Vol. LXXIX. Part I. entitled “ Observations on the
 “ Class of Animals, called, by Linnaeus, Amphibia; parti-
 “ cularly on the means of distinguishing those serpents which
 “ are venomous from those which are not so.”—EDITOR.

“ wide

“ wine and opium.” — This agrees with what we find mentioned in a late publication by Lieutenant Paterfon, who, during his residence in India, became acquainted with this medicine, but who, in a case in which it could not be procured, saw brandy, and Madeira wine, given so as to intoxicate the patient, prove equally efficacious *.

The snake pills have likewise been recommended against the bite of a mad dog; and it appears that Mr. Duffin, while surgeon to the garrison at Vellore, administered them to three sepoyes and eight children who were bit by mad dogs in October, 1787, and that all of these persons escaped the infection, while three other children,

* “ The southern countries of Hindostan abound with the
 “ small snake, called the Covra Manilla, which is well
 “ known to be very poisonous. The Bramins tell us, that
 “ they can administer complete relief in the most desperate
 “ cases; but their mode of practice has hitherto been kept a
 “ secret from Europeans.—Colonel Fullarton, however, pro-
 “ cured a small box of these pills from the Reverend Mr.
 “ Swartz, a missionary at Tanjore; and at the siege of Car-
 “ rore we had an opportunity of proving the effects of them.
 “ One of our sepoyes was bitten, and so ill that we despaired
 “ of his life. The Colonel gave him one of the pills, which
 “ seemed to act as a very strong opiate for some time, and
 O o 2 “ threw

children, who made use neither of this nor of any other means of prevention, died of hydrophobia. These facts are ascertained by the respectable testimony of Mr. Duffin himself, who had the care of the patients, and likewise by the following certificates from Colonel Nixon, Commandant, and other gentlemen of the garrison at Vellore :

“ I attest, that in October last, when the fe-
 “ poys were bit, I had a report that several
 “ children were bitten, whom I directed to be
 “ taken to Dr. Duffin to administer to them the
 “ Tanjore medicine. I understand they are
 “ all well at this period, except one who died a
 “ natural death two months after the bite. I

“ threw him into a delirium; in two days, however, the man
 “ was perfectly recovered.

“ We had also a second proof of their utility, though the
 “ man did not appear to be so ill as on the former occasion.
 “ I was witness to a third case, where we could not procure
 “ these pills. A servant of Lieutenant Smith, in the same
 “ regiment with myself, was bitten. The Lieutenant gave
 “ him nothing but brandy and hot Madeira wine, and kept
 “ him in a state of intoxication for twenty-four hours; the
 “ next day the pain was gone, but the man continued indis-
 “ posed for some time.” — See a Narrative of four Journeys
 into the Country of the Hottentots and Caffraria; by Lieut.
 William Paterson. 4to. London, 1789. p. 166.

“ have also an account that three children were
 “ bit, who did not receive the medicine, and,
 “ from the parents relation, there is every rea-
 “ son to believe they died with symptoms of
 “ canine madness in the space of a month after
 “ the bite.

“ ECCLES NIXON, Col. Commandr.

“ Vellore, March 14, 1788.”

“ List of the Men of the 21st Battalion of
 “ native Infantry, bit by mad Dogs in Oc-
 “ tober, 1787.

“ *Mens Names. Rank. Company. Age. Where wounded.*

“ Vencata Ramah, Sepoy, 4th. 24 Very much torn
 in the wrist and
 arm. ’

“ Papa Naick, - Do. 6th. 45 Bit in the lower
 part of the thigh.

“ Rafapan, - - Do. 2d Grenad. 28 Bit in the leg.

“ We attest the above-mentioned men were
 “ bit by mad dogs in October last. They re-
 “ ceived medicines from Dr. Duffin, and are
 “ well at this period. The dog which bit Ven-
 “ cata Ramah bit a dog of the Fort Adjutant’s
 “ that went mad ten days after.

“ W. VIGORS,

“ Captain commanding the 21st Batt. Nat. Inf.

“ JOHN TAYLOR, Lieutenant and Adjutant.

“ March 14, 1788.”

It

It appears from Mr. Duffin's account that in all of these cases the wound was largely dilated and dressed with mercurial ointment ; so that the facts in question may, perhaps, be thought to prove as much in favour of this part of the treatment as they do of the pills. At any rate, however, it must be considered as a very curious circumstance, that eleven persons, who were treated in one particular way, should all of them be free from infection at the end of five months, while three others, to whom nothing was done, died of hydrophobia within a month after the bite ; but to show how much caution is necessary in the admission and application of facts of this kind, it may not be improper to remind our readers, that when the lichen cinereus terrestris was first introduced to the notice of the public, as a supposed remedy against the hydrophobia, it was said, by Sir Robert Moray, to have been “ given to a whole kennel of dogs “ bitten by a mad one, which were all cured “ except one of them, to whom none of it was “ given*.”

Government, desirous of having the effects of these compositions more fully ascertained,

* Birch's History of the Royal Society, Vol. II. page 492.

have,

have, it seems, given orders that a quantity of each of them be prepared and sent to the surgeon of every station in the presidency of Madras; with directions to distribute them, gratis, to all who may require them, and to transmit an account of their effects to the Hospital Board; so that, at some future time, the public may, perhaps, receive farther and more satisfactory information on this subject.

VI. *Hints towards the Investigation of the Nature, Cause, and Cure of the Rabies Canina: addressed to Dr. Haygarth. By Thomas Percival, M. D. Fellow of the Royal Societies of London and Edinburgh, of the Royal Medical Society at Paris, of the Royal Society of Agriculture at Lyons, and of the Philosophical Society at Philadelphia, &c.*

YOUR proposal, my dear friend, for obviating the baneful effects of the bite of a mad dog, communicated November 17, 1788, claimed my immediate attention; and I wrote to you by the subsequent post, that no delay might take place in the execution of your benevolent

volent project *. I have since read and thought much on the subject; and shall now transmit to you the result of my better information, and more deliberate reflection. To your candour I can lay myself open without reserve; and from your judgment I shall be equally happy to receive either the correction or confirmation of the following suggestions, relative, I. to the nature and cause; II. to the prevention; and III. to the cure of hydrophobia.

The

** Copy of Dr. Haygarth's Proposal for obviating the Effects of the Bite of a mad Dog.*

Near Wrexham, in North Wales, three men died of canine madness in October, 1788.

These melancholy cases spread a general alarm. But it ought to give great comfort and satisfaction to any one who may be bitten, to know that there is a safe, easy, and effectual method of preventing infection; which can seldom give pain, or require skill, and is in the power of every person to employ. It is universally allowed by physicians, that the spittle of a mad animal, infused into a wound, is the only cause hitherto known, that can communicate canine madness to the human body. This poison does no immediate mischief, but is slowly absorbed into the blood; and sufficient opportunity is given to remove it, before any danger can arise. Whenever any person is bitten, the plain and obvious means of preventing any future injury, is, first, to wipe off the spittle with a dry cloth, and then to wash the wound with cold

1. I do not perceive any strict analogy between the action of the canine virus and that of the lues venerea, of the small-pox, or of the viper. These evidently affect the lymphatic system; and their progress into the course of circulation

cold water; not slightly and superficially, but abundantly, and with the most persevering attention; in bad cases, for several hours. After a plentiful affusion of cold water, but not sooner, warm water may be employed with safety and advantage: A continued stream of it, poured from the spout of a tea-pot or tea-kettle, held up at a considerable distance, is peculiarly well adapted to the purpose. If the canine poison infused into a wound were of a peculiar colour, as black, like ink, we should all be aware that plenty of water and patient diligence would effectually wash out the dark dye; but this could not be expected by a slight and superficial ablution. After a bite has been carefully washed, colour it with saliva, tinged by ink, &c. When some hours have elapsed, wash out the stain. A visible proof may thus be obtained, how soon and perfectly water can cleanse a wound from saliva. As a proof that slight washing of the wound is not sufficient to cleanse it effectually from the poison, we may mention, that, in some cases, after inoculation for the small-pox, the poisonous matter has been attempted to be washed out of the wound, by persons who wished to prevent its effects: yet the inoculated small-pox appeared at its proper period. These unsuccessful attempts were performed secretly, hastily, and timidly, by a female hand. But in a case where the inoculated incisions were probably washed with greater

circulation may be readily traced, which is not the case with the poison of a mad dog. Are we then fundamentally right in the idea, that the bite of a rabid animal operates by absorption? Might not its effects be, at least as well if not better, explained by ascribing them to local

care, infection was prevented. Such facts teach us the importance of patient perseverance in washing away the poison; but they need not abate our confidence that such perseverance will certainly be successful.

The ablution should be accomplished with great diligence and without delay; and may be performed by the patient or any assistant. However, as the apprehension of this dreadful disorder always excites the greatest anxiety, a surgeon's advice and assistance ought to be obtained, as soon as possible, in all cases where the skin is injured. He will execute these directions most dexterously and completely. In a bad wound, the poison may be conveyed deep into the flesh, by long teeth or lacerations. In such circumstances he should open and wash every suspicious place. And, whenever any painful uncertainty can remain, he should cup and syringe. If the bite has been neglected till the inflammation has begun, he should, after shaving off the inflamed surface, cup, syringe, and wash with double diligence. By this method of purification, it cannot be doubted that every particle of poison, and, consequently, that every cause of danger may be effectually removed.

[N. B. Let this paper be pasted up in some public places, and in the houses of several sensible and humane persons in each parish.]

nervous

nervous irritation; propagated in different periods of time, according to the varying circumstances of sensibility and irritability, to the brain, and from thence to the fauces, gullet, and stomach? Are not all the symptoms induced of the nervous and spasmodic class? Or, do any marks appear, in the human kind, of a specific vitiation of the fluids?

There seems to be a striking resemblance, in many particulars, between some species of tetanus and the rabies canina*. Now, tetanus is known to be produced, in certain states of the body, by local irritation, without the least suspicion of any absorption of poison, or contamination of the fluids,

Mental

* Dr. Currie, of Liverpool, informs me, that in a case of this disease (tetanus) in which wine proved an effectual remedy, it could only be swallowed at certain moments of diminished constriction. At other times, if it was shewn to the sufferer, the sight produced evident distress; and if it was advanced towards his mouth, it never failed to bring on convulsion. The proper season for administering it was learnt from the patient's signal, as he spoke with great difficulty: and with every precaution, deglutition was interrupted twice out of three times, that it was attempted, by the accession of convulsion. The wound, which gave rise to the disease, was so slight and so nearly healed, that it had escaped the patient's

Mental impressions have repeatedly excited hydrophobia. Some time ago, I attended a clergyman, who laboured under many of the symptoms of it, through the shock occasioned by an official visit, to one of his parishioners, dying of that disease. He had no opinion of the Ormskirk powder, but the Tonquin remedy (musk, cinnabar, &c.) perfectly cured him. As Physician Extraordinary to our Infirmary, my advice is sometimes called for on particular occasions. I was not long since consulted about a man, bitten by a supposed mad dog. He had

notice. If it had escaped the notice of the attendants also, and if they had been unacquainted with the actual appearance of tetanus, my very judicious friend conceives it possible, that the disease might have been named hydrophobia.

The following narrative, which is of a similar kind, I received from Dr. Darwin. A young man had his ankle much torn and bruised by a fall from two horses, which he rode at the same time, standing upright, on their backs. In a few days, a difficulty of deglutition occurred, and he became totally convulsed, on attempting to swallow fluids. Two open ulcers, near the ankle, were then laid into one: the operation however was in vain. Amputation was then proposed, but rejected: and in spite of the use of much opium, and mercurial friction, about the fauces, he died on the succeeding day. In this case, the doctor justly observes, the hydrophobia was evidently produced by sympathy with the wounded parts.

the

the usual affections of the disease, though in a slight degree, which were removed by mercurials and antispasmodics. When the man was recovered, and qualified to state minutely, and without anxiety, the circumstances antecedent to his attack; I was perfectly convinced that his malady had originated solely from the terrors of imagination. In such cases, there can assuredly be no ground to impute the malady to the absorption of any poison; and it must be ascribed entirely to nervous irritation.

The accurate Morgagni has related a case of hydrophobia, occasioned by the bite of an enraged cat, which was not mad. The virus in this case, if virus is to be supposed, could not be of the specific kind belonging to an hydrophobic animal. And the symptoms are to be accounted for in the same way, in which we explain the consequences of a wounded tendon, or the splinter of a fractured bone, when such causes produce a locked jaw or tetanus.

The virus of the small-pox, or of the lues venerea very rarely fails of producing its baneful effects on the body, when applied. Whereas the bite of a mad animal is not found to be deleterious in a very large, though indeterminate number of cases. Is not such a difference thus explicable?

explicable? The former is transmitted into the system by absorption, through a series of vessels, which are uniform and regular in their action. The latter is, perhaps, poisonous only to certain nerves, under certain conditions; so that the chance is always great against its operation. Just so it is with wounds or injuries of the tendons: These are very rarely succeeded by a locked jaw, and only under peculiar circumstances.

That a nerve is capable of irritation, independently of the brain, whilst the vital energy subsists, is evinced by the contractions of the heart, produced by pricking or wounding it, when taken out of the body. May not this be the power which is first excited by the canine poison; and which requires an indefinite time, to operate, before it communicates with the brain, or rouses the perception of injury done to the system? We are informed by a celebrated anatomist (Monro), that the nerves resemble the brain in structure; and that, as they proceed in their course, they acquire additional energy.

Morgagni asserts, that the poison of a mad animal has been known to remain latent even for twenty years, till being excited into action by some cause, certain destruction was the consequence.

sequence. This information, however, he delivers, not on his own authority, but as what he believes to be founded in truth. Whatever doubt may be entertained of its credibility, there can be none of the case, which the same author relates, of a boy under his own inspection, in whom the symptoms of the hydrophobia came on five months after a bite in the leg, by an animal not then known to be mad. And Dr. Vaughan has given us lately the history of a patient, who was bitten in September, without any appearance of canine infection till the sixth of June following. It is evident, therefore, that the injury done may long remain topical, and so slight as not to be perceived. This occurs in affections confessedly originating in the nerves*.

A difficulty in swallowing liquids, or the dread of water, is not always a concomitant of

* Some time since, I attended a lady, who had received a bruise on the os sacrum, by a fall, when she was young. She soon recovered from its effects: but eighteen years afterwards, the rheumatism fixed on the part, was attended with unusually excruciating pain, and long resisted the remedies, commonly employed with much more speedy success in that disorder. In this case, we may presume, there subsisted a morbid topical affection of the nerves, which a subsequent cause rendered manifest.

the other symptoms, incident to persons bitten by mad animals. This only shews a variation in different subjects, in the sympathetic powers of the nervous system. And I have lately met with an equal degree of diversity in an affection of the jaw, produced by an injury from a bodkin in the tendons of the hand. The wound soon healed without any inflammation remaining; the pain was not constant, nor at any time intense. No stiffness was felt in the jaw; but, on the contrary, a weakness and inability to prevent its dropping. The lady chewed and swallowed with ease; but on reading aloud, she had a pain in the maxillary articulation: nor could she prevent frequent yawning. This patient had been long an invalid, previous to the accident; and there was reason to suspect, in her case, some antecedent morbid affection both of the brain and of the spinal marrow..

Dissections have hitherto thrown little or no light on the nature of the rabies canina. Morgagni, though he has related many histories, declines to draw any conclusions from them; observing from a comparison of all, that the dead differ much more from each other than the living. We must therefore be content with conjecture; and adopt with diffidence that hypothesis,

thesis, which appears most consonant to reason and to truth. And this must be our clue in the treatment of persons who may be, or who are actually sufferers by the bite of rabid animals: for we have yet to learn that mode of practice, on the success of which we can place any just dependence. Your proposal, therefore, of a more likely mean of prevention than any yet suggested, merits the cordial thanks of the public.

II. Agreeably to the rules of your printed paper, let the patient, with as much expedition as possible, wipe off the spittle of the dog with a dry cloth, (suppose his handkerchief, as being always at hand) and then, abundantly and with the most persevering attention, wash the wound with water. The preference you give to cold water, for the first ablution, is judicious; and accords with the idea, above advanced, that the nerves are the parts alone injured by the canine virus. They may thus perhaps be rendered torpid, and the virus may be greatly diluted or washed away, before they recover such sensibility as to be capable of suffering from its action. Ligatures, placed above and below the wound, would contribute to the benumbing

action of the cold water*. When this has been sufficiently applied, warm water should be used, not only as a better solvent, but to produce a flow of blood; which, coming from numberless small vessels, may tend to complete the cleansing of the wound †. At this time the cupping-glass would be a good auxiliary ‡.

When the part bitten may be supposed to be as much freed from the poison as can be accomplished by ablution, additional security may, perhaps, be afforded by bathing it very well with the gastric juice of a healthy animal, recently killed. The penetrating quality of this fluid; its energy as an almost universal solvent; and its power of rendering even poisons not only innocent, but nutritious, promise a salutary operation under the circumstances described. If we are to expect an antidote to the canine virus, this fluid seems more likely to prove such, than any other substance yet discovered. For I have

* From the experiments of Abbé Fontana, concerning the bite of the viper, it appears, that ligatures, round the bitten limb, had a very salutary effect.

†. Plunging the part, infected with the poison of a viper, into warm water, and keeping it therein some time, appeared to Abbé Fontana to be truly advantageous.

‡. Vide Cels. lib. VII, cap. 23. § 3.

some

somewhere seen it recorded as a fact, that a piece of meat, imbued with the saliva of a mad dog, has been swallowed by another dog with impunity. The gastric juice of a carnivorous is more active than that of a graminivorous animal. A cat, a dog, or carrion crow may therefore be killed for the purpose. From the last, Abbé Spallanzani obtained this fluid in great purity without injury to the bird, by introducing bits of dry sponge into the stomach.

If the gastric juice be not attainable, probably the saliva of a healthy young person would be the best substitute; and it might be procured by the chewing of rennet, which has been well freed from the salt*. We are informed by Celsus, that the Pfylli sucked, without injury, the poison infused by serpents. The spittle is demulcent, inviscating, and capable of chang-

* The rennet cannot be entirely freed from the salt, with which it is preserved, without depriving it of a considerable portion of gastric juice. Perhaps the salt itself may have some salutary powers. Abbé Raynal asserts, that it counteracts the poison of the American Manchineel tree, vol. V. p. 369. Celsus recommends it in the bite of a viper, lib. V. 27. In Virginia, when the Indians are bitten by a rattle snake, they lay to the part affected the radix Senekæ, well chewed, by which it must be fully impregnated with saliva. See Mead's Works, p. 44.

ing the qualities of bodies by its fermentative nature. One or other of these applications must therefore be renewed several times daily; and the part should be afterwards covered with a cataplasm.

In recommending the several foregoing means of prevention, I would not be understood to preclude excision of the part bitten, when the patient has courage to undergo the operation, and it can be accomplished without danger. But much time may be lost, before the surgeon arrives; the sufferer may long resist all solicitations to submit to the knife; the wound may have been inflicted on the face, or near some large blood vessel; or there may be so little probability of the madness of the dog, as to render it unjustifiable to subject the patient to present pain, and future deformity. In all these cases, your plan of ablation promises much benefit; is liable to no objections; may be instantly executed; and will allow sufficient leisure for a careful and complete excision. The application of caustics has been found unsuccessful: and the explosion of gun-powder could hardly take place in a bleeding wound: nor could we secure its extension through the oblique course of the animal's teeth. To this last consideration you have

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judiciously

judiciously paid attention, by directing water to be poured on the wound from the spout of a tea-kettle.

On the supposition that the hydrophobia is a disease of the nervous class, the means to obviate its access should seem to be such as diminish sensibility and irritability, and give tone and vigour to the system. Bark, steel, cuprum ammoniacum, or flowers of zinc may therefore be administered; and the patient should be directed to use the cold bath frequently. If his mind be agitated, or depressed, laudanum will occasionally be required. I have reason to think, that the late Mr. Hill, of Ormskirk, in some cases, joined opiates with his once celebrated specific. To the use of this popular nostrum, if the patient entertain much confidence in it, there can be no reasonable objection; because only a few doses of it are recommended, and consequently it cannot long interfere with the exhibition of other more active medicines. Perhaps it may be degraded in the estimation of the faculty, by not being administered in adequate quantities, or with sufficient perseverance. To infallibility no remedy yet known can have any just pretensions: and the instances of the failure of the Ormskirk powder
are

are not more numerous than those which have been recorded of every other mean hitherto employed. It is indeed composed of ingredients of no great efficacy in ordinary cases, so far as we can rely on the analysis which has been given of it. But activity or inertness are relative, not absolute, qualities in medicinal substances, and their energies, with respect to the human body, depend on the state of the animal system at the period when they are administered. Experience, therefore, is the only test of their inefficiency or power. In other cases we find that apparently simple means produce very salutary effects. Thus milk is an useful solvent when arsenic has been received into the stomach: and I have been informed, by a gentleman of knowledge and veracity, that, in South Carolina, he has seen the poison of the rattle snake speedily counteracted by the juice of plantane and horehound*. I have enlarged on this topic,

* This gentleman was on a visit in South Carolina when a servant was bitten in the hand by a rattle snake. Ligatures were instantly applied near the part, but the hand and arm swelled; the jaw became somewhat locked; and the man appeared to be in a state of considerable danger. The surgeon administered to him, by spoonfuls, at short intervals, the juice

topic, not from any degree of faith in the powers of the Ormskirk powder as an antidote to the canine poison, but to obviate prepossessions, which mislead investigation and obstruct the attainment of a successful remedy in this most dreadful of human disorders.

III. The accession of canine madness is uncertain as to the distance of time from the bite,
and

juice of plantane and horehound; and the wounded part was covered with a cataplasm of the same herbs bruised. The salutary effects of these remedies were soon apparent, and the servant afterwards perfectly recovered. Mr. Catesby is of opinion that no remedy is yet discovered for the bite of a rattlesnake; yet he acknowledges the having seen recoveries, but imputes them to the efforts of nature and to the slightness of the bite. How far this may be true of the case above related I shall not attempt to decide; but the observation reminds me of an important distinction, made by Boerhaave, on the comparative danger of infection by a mad dog under the different stages of his malady.

Since this paper was written, Dr. Darwin has obligingly communicated to me a passage from Abbé Grosier's Description of China, (Vol. I. page 279) in which it is said, "that
" people are often bitten by serpents at Tang-king, and are
" cured by applying to the wound a stone resembling a chest-
" nut, which is called serpent stone. The stone, after pres-
" sing out the blood, is applied to the wound, to which it
" adheres, sucking out the poison, and then falls off. It is
" then

and the symptoms by which it first manifests itself. But frequently the cicatrix becomes hard and elevated; pains shoot from it towards the head; it is surrounded with livid or red streaks; and the wound breaks out afresh. The friends of the patient should be apprised of the appearances which are to be suspected, that they may

“ then well washed in lime water and dried, and applied a second time to the wound; or another stone may be used; and thus the poison is extracted.” Whether the Abbé’s observations may be relied upon it is not easy to decide; but certain it is that an absorbent earth acts forcibly by the attraction of capillary tubes, as any one may experience by holding a fresh-burnt tobacco pipe between the lips. The poisoned wound, however, must be both recent and superficial to be cleansed by such a remedy. The Bramins of India expose to sale an antidote, which they pretend to be taken out of the head of the hooded serpent. Redi, however, asserts, that it is made of calcined hartshorn, which is an active absorbent. On this occasion you will recollect the fact lately transmitted to you by Dr. Waterhouse, Professor of Physic at Cambridge, in New England, that when a rattle snake bites the nose of a dog, he digs a hole in the ground, lays his head in it, and is commonly cured. It is probable that the surface of the earth is in a very adust, and consequently absorbing state, in those parts of America where such accidents occur; and that the nose of this animal is less susceptible of being injured by poison, from its coldness, and from the slime with which it is covered, than any other part of the body.

be

be sedulously watchful, and give instant notice to the medical practitioner employed of the change which has occurred. In this first stage of the disease a large dose of thebaic extract should be administered, to obtain, if possible, a truce. This remedy seems appropriate to various symptoms of the hydrophobia; and we might have hoped it would have merited our entire reliance, from Mr. Pott's assurances of its great efficacy in the painful mortification of the toes, which is somewhat analogous in its commencement. But experience has shewn that it produces no lasting benefit; and recourse must be had, without delay, to some other medicine, adequate to counteract the impression of the canine poison by another impression, equally forcible, on the nervous system*. The qualities of the fox glove, and its quick action, seem to recommend it to our trial on this occasion. It affects the brain very powerfully; excites long-continued sickness and vomiting; and has been supposed to produce a copious flow of

* Probably the efficacy of half drowning the patient, which practice is said to have been successful in a few instances, must have arisen from the counter-impression made on the nervous system. — *Vide* Vanswieten. Comment. Vol. III. page 559.

saliva *. The last effect may be promoted by mercurial unctions, from which, in a few instances, some benefit seems to have been derived.

The propagation of local nervous irritation to the brain is manifest in certain cases of epilepsy, and is obviated by tight ligatures. This fact seems to point out a similar treatment of the hydrophobous patient, as soon as the part bitten shews any signs of infection. Whether excision may then be advisable must be determined by its situation, and by circumstances, about which the attending physician or surgeon can alone decide. Should the wound open, it may be dilated, and washed with tepid water; after which the gastric juice may be again applied. It has been found highly serviceable in foul ulcers, and is quick in producing its effects. It sweetens their savor; eases lancinating pains; and corrects even the cancerous acrimony. Over the dressings a fermenting cataplasim may be laid, composed of flour, honey, water, and yeast.

Such are the additions to your means of prevention, and such the curative plan, which I

* See Withering on the Fox Glove, page 184.

take the liberty of suggesting to your consideration. Both may perhaps seem superfluous to you, whose generous zeal, for the good of your fellow creatures, has elevated hope into confidence, and makes you say of the sufferer, in the language of a well-known amiable character, “ he shall not die.” I heartily wish that experience may fully confirm your sanguine expectations. But though I highly approve of your proposal as judiciously conceived, bidding fair to be successful, and so easily practicable, that it should be adopted, after the bite of every animal, to obviate even unsuspected danger; yet at present I can regard it only as a rational hypothesis on a subject still remaining in much obscurity. We are ignorant of the peculiar properties of the canine virus; of the mode of its communication; and the parts of the animal system affected by it. Are we then qualified to advance one step beyond conjecture? and ought we to rest satisfied with mere ablution, when it is uncertain what time is required for the agency of the deadly poison, and whether its baneful operation may not be accomplished even before the completion of the speedy process you have pointed out? But admitting, what I sincerely hope may be found to be the truth, that

the plentiful affusion of water will prove an effectual means of prevention, there will still remain the necessity of a curative plan in those cases, wherein the former has been neglected, or in which the disease has unexpectedly occurred.

I shall think myself happy if the hints I have proposed merit your approbation : but it will render me still more happy if they incite you to extend your researches, and afford aid to your enlightened mind, in perfecting its discoveries on the important object of your investigation.
Fungar vice cotis — non inani munere.

Manchester,
May 1, 1789.

P O S T S C R I P T.

August 11, 1789. — Before this paper was sent to the press I had not perused the valuable Observations on the Cause and Cure of the Tetanus, by Dr. Rush, of Philadelphia. He has obligingly sent me the volume of Medical Inquiries in which they are contained; and in the Appendix to his Essay I am much pleased to find a coincidence in our ideas of the ana-
logy

logy between tetanus and hydrophobia. I shall transcribe the passages which have a reference to it.

“ The more I have considered the causes
 “ and symptoms of hydrophobia, the more I
 “ am disposed to ascribe it to the same proximate
 “ cause as the tetanus. 1. They both affect
 “ the muscles of deglutition. I have lately
 “ seen a tetanus brought on by a fractured leg,
 “ in which an attempt to swallow the smallest
 “ quantity of liquid produced the same sudden
 “ and general convulsions which occur in the
 “ hydrophobia. 2. They both proceed from
 “ causes which appear to be related to each
 “ other, viz. from wounds, and from the action
 “ of cold, after the body has been previously
 “ weakened by heat and exercise. 3. They
 “ both sometimes appear as symptoms of the
 “ same idiopathic disorder, viz. the hysteria.
 “ 4. They both yield to the same remedies, viz.
 “ to the excitement of an inflammation in the
 “ wounded part of the body, or to a long-con-
 “ tinued discharge of matter from it, and to
 “ mercury.

“ If more facts should occur, which shall
 “ shew the relation that the tetanus and hydro-
 “ phobia have to each other, perhaps we may

“ be

“ be led to conclude, that the wound inflicted
 “ by the teeth of a dog sometimes acts in the
 “ same manner in producing hydrophobia—that
 “ wounds made by a nail, or any other lacera-
 “ ting instrument, act in producing tetanus,
 “ and that both diseases may be prevented or
 “ cured, with equal certainty, by the same tonic
 “ remedies.”

The tetanus is ascribed, by Dr. Rush, to relaxation: and in the cure of it, he says, it is necessary not only to restore the ordinary tone of the system, but to produce something like the inflammatory diathesis. A splinter under the nail, he affirms, produces no convulsions, if pain, inflammation, or suppuration follow the accident; and that the spirit of turpentine acts, by the excitement of pain and inflammation, in all wounds and fractures of tendinous parts. He has never known a single instance of tetanus from a wound to which this remedy had been applied in time. In the island of St. Croix the negroes, he relates, always apply a plaster, made of equal parts of salt and tallow, to their fresh wounds, to prevent the locked jaw; and that the salt never fails to produce some degree of inflammation.

These

These facts confirm the propriety of applying the gastric juice to the part bitten by a supposed rabid animal, because it is powerfully stimulant, as well as penetrating, solvent, and detergent: and if rennet be substituted, as recommended in page 307, there will be no necessity for separating any more of the salt than what adheres to it superficially.

VII. *Of the good Effects of a Decoction of the outer Shell of the Walnut in the Cure of Ulcers.* By J. Hunczousky, Professor of the Operations of Surgery, &c. in the Imperial and Royal Josephine Medico-Chirurgical Academy at Vienna. Vide *Acta Academiæ Cæs. Reg. Josephinæ Medico-Chirurgicæ Vindobonensis* *, Tom. I. 4to. Vindobonæ, 1788.

THE decoction here recommended, as a topical remedy in ulcers, is prepared by macerating an ounce of the dried green outer

* Besides this edition, in Latin, of their Transactions, the Academy have published another in German, which we have already announced. See Vol. IX. page 101.

shell, or husk, of the walnut in a pint of water during three or four hours, and afterwards boiling these ingredients for about a quarter of an hour. The liquor, when cold, is to be filtered; and lint moistened with it is to be applied to the sores.

The author mentions the good effects of this application in ulcers in general; but more particularly in what he calls broad, flaccid ulcers *, and in moist, herpetic ulcers, which he supposes to originate from a local acrimony in the skin, and which are not attended with inflammation †.

He asserts, that by means of this remedy the healing of the ulcer is promoted with a degree of celerity that is seldom experienced from other applications; and that during its employment the use of escharotics is never necessary for the removal of spongy flesh, as the decoction never fails to remove this fungus in the course of a few days.

A particular account is given of seven cases,† in which he has succeeded with this decoction

* *Ulcera lata et flaccida.*

† *Ulcera humida, herpetica, quæ originem suam a quadam acrimonia in cute sita trahunt, et ubi nulla inflammatio adest.*

after a variety of other topical applications (though assisted by purgative and other internal remedies) had proved ineffectual; and the author adds, that he has found it equally serviceable in upwards of thirty other cases of ulcers in which he has tried it, and in which the usual remedies had failed.

Whatever may be the merits of this application, it cannot be said to be altogether new; for we find a preparation very similar to it, viz. a decoction of the leaves of the walnut tree, with the addition of a little sugar, recommended by Belloste as a topical remedy of singular efficacy in ulcers.

Belloste observes, that many persons in France had made a great secret of this decoction; but that he should have thought himself deficient in humanity had he omitted to make known its good qualities and the manner of preparing it. He assures us that in a thousand instances he had experienced its good effects; and that, since he had been in the habit of employing it, ulcers, till then considered as incurable, had been healed by it in a very short space of time *.

* See his work, entitled *Le Chirurgien d'Hopital*. 4th Edition. 8vo. Amsterdam, 1707. p. 239.

VIII. *An Account of a particular Change of Structure in the human Ovarium.* By Matthew Baillie, M. D.—From the *Philosophical Transactions of the Royal Society of London*, Vol. LXXIX. for the Year 1789. Part I. 4to. London, 1789.

THE ovaria in women are subject to a great variety of changes from their natural structure. Many of these are exactly similar to what take place in other parts of the body; but there is one which seems peculiar to them, the nature of which has probably not been hitherto very well ascertained. The change of structure to which I allude is a conversion of the natural substance of an ovarium into a fatty mass, intermixed with hair and teeth. This sort of change is rare, although it occurs sufficiently often to have been seen by most persons who are very conversant in the examination of dead bodies. There are many cases of it related in the different books of dissections, but, as far as I have discovered, most commonly without any remarks upon the mode of formation*; or they

* It has been the opinion of some, that hair, teeth, nails, feathers, &c. are animal vegetables or plants; and, agreeably

they have been considered as very imperfect attempts at the growth of a foetus in the ovarium, in consequence of connexion between a male and a female. This conjecture rests no doubt on strong circumstances of probability, and yet there are many powerful reasons which seem to oppose its being well founded. Generation is a process always depending on the action of a certain cause, viz. the usual connexion between a male and a female; and, when effects similar to those in generation are perceived, it becomes very natural to conclude that this cause has been employed. The bias to such an opinion will become the stronger, from reflecting on the passions that are known to influence so powerfully mankind, by which the agency of this cause is frequently excited. When a change, therefore, was observed in an ovarium, by which it was converted into a fatty mass, with hair and teeth, this should seem to correspond so much with a change taking place in consequence of generation, that the mind would scarcely enter-

to this opinion, Dr. Tyson considers the growth of hair and teeth in the ovarium as a *lusus naturæ*, where nature endeavours to produce something, and, being disappointed in forming an animal, produces a vegetable.—Vide Hooke's Lectures and Collection, No. II. p. 11 and 15.

tain a doubt of its arising from the same cause, and would readily infer that it had been preceded by a connexion between the sexes. This doubt would still be less, from the circumstance of a complete foetus being sometimes formed in the ovarium where the usual means of generation had been employed. The following case, however, exhibits many reasons why we should be led to believe that the ovary in women have some power within themselves of taking on a process which is imitative of generation, without any previous connexion with a male ; and it is with this view that I proceed to relate it.

In a female child, about twelve or thirteen years old, which was lately brought to Windmill Street for dissection, I found the right ovarium converted into a substance, doughy to the touch, and about the size of a large hen's egg. Upon cutting into the substance, I found an apparently fatty mass, intermixed with hair and an excrescence of bones. This startled me very much, as I had always been led to believe that such appearances were a sort of imperfect conception. The circumstances altogether being very singular, I was led to pay considerable attention to the change in the ovarium.

The

The fatty mass was of a yellowish white colour, in some places more yellow than in others, was very unctuous to the feeling, and consisted of shortened or separated particles, not having the same coalescence which the fat has generally in the body. It became very soft when exposed to the heat of a fire, and sunk into a portion of paper, on which it was spread, so as to make it more transparent. When the paper to which it was applied was exposed to the flame of a candle, it burnt with considerable crackling.

The hair with which the fatty substance was mixed grew out of the inner surface of the capsule containing it, in some places in solitary hairs, but chiefly in small fasciculi, at scattered irregular distances. Besides these, there were loose hairs involved in the fatty mass. The hairs were, some of them, of considerable length, even to three inches, were fine, and of a light brown colour. They resembled much more the hairs of the head than what are commonly found on the pubis, and corresponded very much in colour to the hair of the girl's head.

There arose also from the inner surface of the capsule some vestiges of human teeth. One appeared to be a canine tooth, another to be a small

small grinder, two others to be incisors, and there was also a very imperfect attempt at the formation of another tooth. These were not fully formed, the fangs being wanting; but in two of them the bodies were as complete as they are ever found in the common circumstances. They were each of them inclosed in a proper capsule, which arose from the inner surface of the ovarium, and consisted of a white thick opaque membrane. Attached to the capsules of three of the teeth there was a white spongy substance. The membrane of the ovarium itself was of some considerable thickness, but unequal in the different parts, was very smooth in its inner surface, and more irregular externally. The uterus was smaller than it is commonly at birth, was perfectly healthy in its structure, and upon opening into its cavity it exhibited the ordinary appearances of a child's uterus at that period. The left ovarium was very small, corresponding to the state of the uterus. It appears clearly from this that the uterus had not yet received the increase of bulk which is usual at the age of puberty. The hymen was entire, such as is commonly found in a child of the same age; and there was just beginning a *lanugo* upon the labia, not more than

6
what

what is often found on the upper lip of a boy of fifteen years old. Such are the circumstances attending this singular case, and they present to the mind various grounds of consideration.

The formation of hair and teeth is a species of generation, for in fact it makes a part of it, and strikes the mind as being very different from any irregular substance which is formed by disease. This formation, too, takes place in a part of the body which is subservient to generation, and where a complete foetus is sometimes formed. The whole of this looks very much as if the production of hair and teeth in the ovary was a sort of imperfect impregnation. But when we take another view of it, there are reasons at least equally strong for believing that such productions may arise from an action in the ovary itself, without any stimulus from the application of the male semen.

In the case before us the uterus was as small as at birth, indeed more so, and the left ovary (which was perfectly healthy) corresponded to the state of the uterus. It had not been at all stimulated, nor did appear capable of being stimulated, by the application of the male semen. This seems to be a strong circumstance; for in a case where there was an ovum formed
in,

in one of the Fallopian tubes, the uterus was enlarged to more than twice its unimpregnated size. and, upon opening into its cavity, the decidua was observed to be formed as completely as in the impregnated uterus. This preparation is still preserved in the collection of Windmill Street. Nothing can be a stronger proof, that when an impregnation takes place out of the cavity of the uterus, the uterus still takes a share in the action, and undergoes some of the changes of impregnation. In another preparation, which is preserved in the same collection, where there was a fœtus formed in the ovarium, the uterus was increased to more than twice its ordinary size, was very thick and spongy, and had its blood vessels enlarged as in an impregnated uterus. This becomes another very strong proof of the action of the uterus in the formation of an extra-uterine fœtus. In the case before us, however, the uterus had undergone no change, and does not seem to have arrived at that period when it could be capable of undergoing such a change.

Besides we are not to consider the formation of teeth in the ovarium to be a quicker process than it is commonly in the head of a fœtus; but in the present case the teeth having advanced fully
as

as far as they are at some months after birth, this process must have begun at least more than a twelvemonth before the death of the child. If then we consider it as an impregnation, since the appearances of the child do not warrant us to believe her to have been more than twelve or thirteen years old, this brings the date of the impregnation to an earlier period than can well be believed. From all these circumstances we might be led to suppose that the formation of the hair and teeth was not in consequence of any connexion with a male, but arose from some action of the ovarium itself, in which the uterus did not participate. The existence of the hymen, especially in so young a girl, becomes a collateral confirmation of the same opinion, although much is not to be rested on it when taken singly.

It will, perhaps, have some influence in removing the prejudices against this opinion, to make the following remarks:—Hair is occasionally formed in parts of the human body which are absolutely unconnected with generation. Encysted tumours are sometimes found containing hair. Mr. Hunter has a preparation of this sort in his collection, which he cut out from under the skin of the eyebrow. This

tumour was perfectly complete, and unconnected with the skin, except by the common intervention of cellular membrane, so as to have no communication whatever with the hair of the eyebrow. In this instance there was certainly a species of generation taking place in the encysted tumour itself, forming hairs as completely and fully as in the common progress of the formation of a child. Such encysted tumours have been found in other parts of the human body, and still more frequently in quadrupeds. Mr. Hunter has in his collection many specimens of encysted tumours from cows and sheep containing hair and wool. These were perfectly complete, so as to have possessed a power of production within themselves, and were many of them found deeply seated at a considerable distance from the skin, which is the common parent of hair. In these tumours there is often the appearance of layers of cuticle, which is probably a preparatory step to the formation of hair. All this shows most clearly that hair may be formed without any species of generation, as it is commonly understood.

But hair is in itself as distinct a consequence of generation as teeth, and as much a peculiar substance.

substance. If, then, the one be formed, there appears to be no reason why the other should not also be formed. The action producing the one is not better understood than that producing the other ; nor does it appear to be really in itself less connected with that species of generation arising from the approach of a male, so that teeth may probably be formed by a peculiar action taking place in the ovarium itself as well as the hair.

It will tend to add farther weight to this opinion, to consider that many of the adult teeth are formed in a child after birth, and therefore their formation depends on an action taking place in the jaws at a particular period, and not on original growth. The same circumstance strikes more strongly in the occasional formation of teeth at an advanced time of life. Both of these processes take place after the animal has been formed, in consequence of a certain action being excited in a particular part of the body, and therefore there is less difficulty in believing that the same sort of process may go on in another part of the body not commonly employed in it. It seems reasonable also to suppose, that the ovaria should have a greater aptitude of taking on a process some-

what similar to generation than the other indifferent parts of the body, as they constitute a part of the organs which are so materially concerned in the real process itself*. These circumstances, when taken collectively, would seem to render it very probable that the formation of hair and teeth in the ovarium does not necessarily depend on a connexion between a male and a female, (as has been the common opinion) but arises from some action within the ovarium itself which is imitative of generation.

CATALOGUE OF BOOKS.

1. **A**N Account of the principal Lazarettos in Europe; with various Papers relative to the Plague: together with further Ob-

* As the formation of teeth and hair involved in a fatty mass may be said to be peculiar to the ovaria, and as there are strong reasons for believing that this formation may take place without any intercourse between the sexes, it becomes difficult to account for this peculiarity in them, unless by supposing that they have a greater aptitude of running into such a process than the other parts of the body.

servations

servations on some foreign Prisons and Hospitals; and additional Remarks on the present State of those in Great Britain and Ireland. By *John Howard*, F.R.S. 4to. *Cadell*, London, 1789.

2. A Treatise on the Diseases of Children, with general Directions for the Management of Infants from the Birth. By *Michael Underwood*, M. D. Licentiate in Midwifery of the Royal College of Physicians in London, and Physician to the British Lying-in Hospital. A new Edition, revised and enlarged; in two Volumes, 8vo. *Matthews*, London, 1789.

3. An Essay on Phlogiston, and the Constitution of Acids. A new Edition. By *R. Kirwan*, Esq. Member of the Academies of Stockholm, Upsal, Dijon, Dublin, Philadelphia, Manchester, &c. To which are added Notes, exhibiting and defending the antiphlogistic Theory, and annexed to the French Edition of this Work, by Messrs. *De Morveau*, *Lavoisier*, *De la Place*, *Monge*, *Berthollet*, and *De Fourcroy*: translated into English. With additional Remarks and Replies, by the Author. 8vo. *Johnson*, London, 1789.

4. Asiatic Researches; or, Transactions of the Society instituted in Bengal for inquiring into
into

into the History and Antiquities, the Arts, Sciences, and Literature of Asia. Volume the First *. 4to. Calcutta, 1788.

5. Advice to Gouty Persons. By Dr. *Kentish*. 8vo. *Murray*, London, 1789.

6. Observations on the Brunonian Practice of Physic, including a Reply to an anonymous Publication reprobating the Use of Stimulants in Fevers. By *George Mossman*, M. D. 8vo. *Law*, London, 1788.

7. Memoirs of the Medical Society of London, instituted in the Year 1773. Vol. II. 8vo. *Dilly*, London, 1789.

8. The Instruments of Medicine; or, The Philosophical Digest and Practice of Physic. By *George Hoggart Toulmin*, M. D. 8vo. *Johnson*, London, 1789.

9. A Lecture on the Atmosphere of London, as read before a public Society, June 14, 1788; with four Plates illustrative of the Phenomena, and a Preface. By *Benjamin Taylor*. 4to. *Dilly*, London, 1789.

* We meet with two papers on chemical subjects in this volume, viz. 1. Of the method of distilling as practised by the natives of Chatra in Ramgur; by Archibald Keir, Esq. 2. The process of making *Attar*, or Essential Oil of Roses; by Lieutenant-colonel Folier.

10. History of some of the Effects of Hard Drinking. By *J. C. Lettsom*, M. D. F. R. S. and F. S. A. 4to. *Dilly*, London, 1789.

11. The Works of the late *John Gregory*, M. D. 4 Vols. 8vo. *Cadell*, London, 1788.

12. Dissertatio Inauguralis Medica de Tartari Emetici præparatione et viribus medicis; Auctore *Christian. Frider. Witting*, Eimbecca-Hannoverano. 8vo. *Gottingæ*, 1788.

13. Amphibiorum virtutis medicatæ Defensio inchoata quam Præsides *Johanne Hermann*, Doct. et Prof. Med. Publ. Cap. Thom. Can. solemniter defendet die 29 Martii, A. 1787, *Joannes Godofredus Schneiter*, Argentinenfis. 4to. Argentorati, 1787.

14. Amphibiorum virtutis medicatæ Defensio continuata, Scinci maxime Historiam expendens; quam Præsides *Johanne Hermann*, Med. D. &c. solemniter defendet die 4 Aprilis, 1789, *Jacobus Fridericus Schweighæuser*, Argentinenfis. 4to. Argentorati, 1789.

15. *Dominici Vandelli*, Academiæ Regalis Scientiarum Olisiponenfis Socii, &c. Viridarium Grisley Lusitanicum, Linnæanis nominibus illustratum, jussu Academiæ in lucem editum. 8vo. Olisipone, 1789.

16. *Dominici Cyrilli* in Neap. Lyceo Med. Theor.

Theor. Prof. &c. &c. *Plantarum rariorum Regni Neapolitani Fasciculus primus cum Tabulis æneis.* 4to. Neapoli, 1788.

17. Abhandlung ueber die Venerische Krankheit; von *Christoph Girtanner*, der Arzneiwissenschaft und Wundarzneikunst Doctor, der Koenigl. Societaet der Wissenschaften zu Goettingen Correspondenten. 8vo. Gottingen, 1789. Vols. II. and III.

These two volumes, to which the work has been unavoidably extended, complete the author's plan *. They contain a very curious and (so far as we are able to judge) accurate review, in chronological order, of more than eighteen hundred different publications on the venereal disease. At the end of the third volume Dr. Girtanner has given copious extracts, relative to this subject, from the earliest (chiefly Spanish) writers on the History of America.

18. Das Allgemeine Krankenhaus in Mainz, &c. *i. e.* The General Hospital at Mentz described by *Charles Strack*, M. D. Professor of Physic in the University of Mentz, &c. 8vo. Franckfort on the Main, 1788.

* See Vol. IX. page 417.



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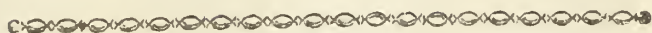
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- I. *An Account of a remarkable Disease of the Heart, Lungs, and one of the external Mammæ; with the morbid Appearances as they presented on Dissection. Communicated in a Letter to Dr. Simmons, F. R. S. by Mr. Robert Kinglake, Surgeon at Chipping-Norton in Oxfordshire.*

EVERY endeavour to investigate the causes of disease deserves well of the community at large, but more particularly of medical practitioners; and indeed the latter appear unanimously anxious to observe every notable circumstance that occurs in their professional pursuits. It is a pleasing connexion to see the doctrine of distempers apply in explanation of the various dissimilar forms under which they are too often disguised; and, if possible, a still more valuable acquisition, when we can discover, by ocular testimony, what has eluded the researches of our closest reflection. Instances frequently happen where dissections prove the most plausible theories to have been

been founded in error ; the symptoms and dissection of the following case would seem, in some respects, to justify the truth of this remark.

Catherine Kinch, of Enstone, in the county of Oxford, aged twenty-one years, and of a very delicate habit of body, began, about three years since, to complain of an uneasy sense of motion at her heart, which she attributed to a jolt she had recently received when riding in a carriage. From this period may be dated the commencement of a disease that afterwards became a source of incessant affliction, and at length terminated in death.

The most predominant complaint for a considerable time, at least what chiefly engaged attention, was an enlargement of the whole substance of the left breast. This enlargement was not like that sort of induration which frequently occurs on the glandular structure of the breast, for it bore a nearer resemblance to hydropic tumours, feeling soft, and yielding to the touch ; but did not, like anasarca or œdematous tumefactions, retain an impression of the finger. What is more singular is, that from the whole cuticular surface of the breast was copiously emitted a fluid, differing from the

formal appearances of purulent matter only in being less viscid; and in proportion as this exudation was more or less abundant would be an increase or diminution of pain, both throughout the whole extent of the tumour, and in the cavity of the chest, more particularly in the left side about the region of the heart. Ease, or rather a remission of pain, invariably ensued an increase of the discharge, and *vice versa*.

Whatever cause this morbid drain proceeded from, it greatly contributed to allay the irritation that prevailed on the tumid breast and thoracic viscera. After it had continued about six months, the pain, tumour, and discharge, began gradually to subside; and as the symptoms became less considerable at the breast, the mucous glands of the posterior fauces were more and more affected, until at length every symptom that had marked the complaint at the breast was now apparent in the throat, leaving no doubt of the affection having been transferred to this part.

No advantage accrued to the patient from the transposition; on the contrary, the previous uneasiness at the heart and lungs was aggravated thereby to a most formidable throbbing, and sense of suffocating stricture, alternating

nating with almost a state of inaction and consequent syncope.

The discharge from the fauces was not only troublesome by keeping up a constant necessity for spitting, but it often acquired such a degree of acrimony (probably from the circumstances of confinement and heat) as to inflame and sometimes excoriate the membrana faucium, rendering both speaking and swallowing equally painful.

No cough at any time attended, unless when excited by the discharge happening to be unusually glutinous, and tenaciously adhering to the uvula and tonsils, or when in cleaning the throat, by gargling, a small quantity of the fluid escaped the epiglottis, and stimulated the trachea, so that its occurrence was purely accidental, and by no means characteristic of pulmonary affection.

The state of the heart and lungs now seemed to claim the first attention. Medicine, tried in every form, and variety that could be likely to render service, availed nothing. Bleeding, which was at first used sparingly, and at distant intervals, had but little better effect, until the extreme pressure of the symptoms demanded its more frequent employ, and proved it to be the

the only sure means of lessening the most exquisite sufferings, and obviating certain death. It was, therefore, repeated perhaps with an unprecedented frequency and continuance. A loss of blood was found equally serviceable in moderating the violent palpitations of the heart, and restoring it to action when almost motionless.

During the space of two years at least three hundred and twelve venæsections were performed. About four ounces were the average quantity of blood taken away at a time; a less quantity was found by experience to have no effect. The operation was repeated at first twice a week, then every other day, and latterly every day. The relief given was uniformly the same. To describe the benefit gained by each bleeding would be to exhibit the difference between the most afflicting pain and comparative ease. It immediately alleviated the severity of every symptom, and, instead of destroying strength, it sensibly invigorated the powers of the system; but such was the fatal complication of disease, that nothing more than temporary palliation could be obtained.

At length symptoms of general irritation took place, accompanied with irregular returns

of fever, under which the patient gradually sunk, and died, on the 23d of May, 1789, in the most tabid state imaginable.

The day after her decease I was permitted (in consequence of the patient's most earnest request) to open the body, when many very interesting appearances of disease presented.

The pericardium was found to contain a full pint of water; and both sides of the thorax were filled with a similar fluid, excepting where the cavity was obliterated by morbid adhesions to the pleura. At a small distance beyond the sinus venosus, a little within the anterior edge of the right auricle, were found closely adhering to the sides of its cavity, and also to that of the right ventricle, several distinct fleshy concretions resembling polypi, of different sizes. The largest was as big as a common walnut, and situated in the right auricle*. These adventitious

* On careful examination I found these concretions were not of a perfect vascular or muscular structure; they were, for the most part, exanguious; minute fibrillæ were indeed visible, but so thickly enveloped in an adipose substance as to make but a very small proportion of their bulk: they were not unlike the description given by Thomas Bartholin in his Anatomy, where he says, "Præter naturam multa in ventriculis

ventitious substances obstructed more than half of the cavities of the right auricle and ventricle. In the trunk of the pulmonary artery, or rather in its tunics, about half an inch beyond the valvulæ sigmoidales, was discovered a hard stony substance, weighing about half a drachm, and projecting so far into the cavity of the artery as very much to abridge its capacity. The lungs were not ulcerated, but the bronchial vessels were universally loaded with a diseased sort of mucus. The abdominal viscera were for the most part apparently sound, excepting the stomach, which was very much extenuated in its natural substance, feeling more like a thin delicate membrane than a dense muscular organ. The glands and cutis of the affected breast were in a natural state; neither had the tonsils, uvula, or neighbouring glands, sustained

“ triculis reperiuntur. Bauhinus frustula adiposa & Wormius noster experientissimus ex utroque ventriculo carunculas quasdam interius albicantes exterius rutilo colore emergentes quod & nos Patavii pridem & Haffniæ in dissectionibus nostris invenimus . . . Erastus concretionem pituitosam, flavescens instar medullæ, quæ in boum coctis ossibus reperitur; Vesalius glandulosæ nigricantisque carnis libras duas, Beniventus frustulum carnis instar mespili.” — Vide Th. Bartholini *Anatome*, 8vo. Lugd. Bat. 1673. p. 393.

X x 2

a visible

a visible change : but what seems still more extraordinary is, that, notwithstanding the excessive evacuation of blood, the whole vascular system, even to the *vasa vasorum*, was rather full of coagulated blood than otherwise, and the muscles had not lost their natural redness.

These were the appearances which more particularly deserved attention, and which perhaps may be admitted in explanation of the various symptoms that prevailed. The external complaint of the breast had most probably a local consent with the internal irritation arising from the embarrassed action of the heart, as the latter greatly increased with the transference of the former. The extraordinary exudation of the breast was not unlikely influenced by the general plethora produced by the polypose concretions in the right auricle and ventricle of the heart impeding a ready admission of blood from the *venæ cavæ*. The resistance was also added to by the calculus in the pulmonary artery*, and the fixed pain in the right lobe of the lungs may be reasonably ascribed to the ir-

* The patient had complained of a constant pain in her side for several years, nearly corresponding to the part where the stone was found.

ritation of that foreign body. The watery collections would appear to be the natural consequence of weakness, obstruction, and redundancy.

The morbid excrescences found in the cavity of the heart were most likely the result of inflammation, occasioned by the painful jolt before mentioned. The process by which inflammation produces new parts is too well understood to require a particular explanation. It may be sufficient to observe, that the exhaling vessels of the interior surface of the heart, as well as of any other part of an animal body, when duly stimulated, will furnish coagulable lymph capable (in convenient circumstances) of becoming a fit medium for vascular extension and growth. Thus new parts are generated, the inflammation ceases, and with it the creative action. A newly-formed substance, if adequately nourished, will permanently remain; if not, it will gradually waste until it wholly disappears.

Although calculi are more frequently found in the course of the urinary passages and biliary ducts, yet they may be formed in any part of the body, as we find (among many other instances) from the peculiar situation of the stone
alluded

alluded to. Indeed this will not appear very extraordinary when we consider that the animal juices plentifully abound with calcareous matter, of which calculous substances in general are principally composed. Either the red globules of the blood, coagulable lymph, or incipient ossification, may become a nucleus or attracting point; but the subsequent accretion and increase are perhaps chiefly derived from calcareous earth*.

As no lesion of parts, or solution of continuity, as it is called, was to be seen either on the cutis of the breast, or membrane of the fauces, the discharge from these surfaces must have been produced by an unhealthy action of sound vessels; an additional instance this in sup-

* Whatever theories were entertained by the ancients respecting a new formation of parts were more or less embarrassed by the humoral pathology, and perplexed by the supposed salutary power of the *vis medicatrix naturæ*: a curious instance of this occurs in Bartholin's explanation of preternatural substances — "*Omnia ab humorum siccitate & ad motum tarditate in senibus & ægris deduco. Utitur tamen hoc defectu natura ad tardio rem motum sanguinis incitandum & accelerandum, sicut aquæ injecto ligno facilius labuntur, vel ne sanguis totus grumescat, sicut mulierculæ & laniones bacillo agitant sanguinem in usus farcinis.*" — Vide Th. Bartholini *Anatome*, page 394.

port

port of the doctrine that a denuded surface is not a *sine qua non* to the formation of purulent matter. I believe this theory is now pretty generally admitted, and the attentive observer will perhaps invariably find that the fluid which results from a deranged action of sound parts will assume more or less of the appearances of pus, according as the inflammatory action has been excessive, moderate, or deficient. A certain force or extent of action is necessary to produce a genuine suppuration; and any considerable deviation from this standard will be shewn by a corresponding variation from its perfect state.

That the vascular system was not more depenished of its blood might be owing to the digestive faculties of the stomach having acquired an increased assimilatory power to supply the deficiency that must have been induced by the frequent loss of blood, on the principle of inanition being a stimulus to the animal œconomy to furnish what is wanting. The same law of nature extends to all the visceral functions of the body. Thus if the stomach and bowels are empty, the sensation of hunger is excited; if the urinary bladder, the kidneys are stimulated; if the feminal vessels, an increased

creased secretion of semen follows; and what is more applicable, if the gall bladder and biliary ducts are emptied by vomiting, the secreting action of the liver will be so far augmented as to send an amazing redundancy of bile to the duodenum; and why, on parity of reason, may not the constitution at large, *pro tempore*, call on the digestive organs (as the natural medium through which it receives its nourishment) for that support which the exigences of its exhausting state may require. Thus has provident nature so secured a due execution of the office of life as to make even irregularities operate as remedies. The organic derangements found in this case were too locally fixed to admit of a curative indication being drawn from them in similar circumstances; yet they may be allowed some claim to attention both in a physiological and pathological point of view. What, for instance, can be more interesting than to observe nature struggling against obstacles to the circulation seated at the very fountain of life; or to attend to the advantages of an unparalleled series of blood letting, which seemed to be effected by diminishing the impetus of the circulation from the *venæ cavæ* into the right auricle? And when

we consider the diseased substance in the cavities of the heart, the calculus of the lungs, the singular affection of the left breast, and its metastasis to the throat, the hydropic collections and morbid adhesions (all of which are circumstances more or less deserving of notice) we cannot but acknowledge, that although they might be in themselves irremediable, yet that there is something more than unprofitable speculation, or mere theoretical amusement, in well distinguishing what causes of disease are necessarily fatal, and why they are beyond the reach of medical art.

Chipping Norton,
August 13, 1789.

II. *Facts relative to the Small Pox. Communicated in a Letter to Dr. Simmons by Mr. Thomas Davidson, Surgeon in Carriacou.*

IN the month of January, 1786, upwards of fifteen hundred persons, the greater number of whom were negroes, were inoculated for the small pox upon this island; and at that time a negro woman, then in the third

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or fourth month of her pregnancy, underwent the disease.

She was inoculated on the 11th of January, 1786, and was delivered of a girl about the same time of July following. This negro girl, when near three years of age, was inoculated in both arms on the 10th of May, 1789, with fluid matter taken immediately from a person under the disease. Suppuration of the arms took place as usual, and about the ninth day the eruptive fever commenced, which, three days afterwards, was succeeded by a kind eruption of small pox, to the number of forty or fifty pustules.

From this case it will appear evident that the small pox, seizing the mother while pregnant, will not always be communicated to the child *in utero*; although there have been the most undoubted proofs of this having sometimes happened.

Here is one example in the earlier months of utero-gestation. *Quære*, Are infectious diseases more liable to be communicated in the latter months?

Another case occurred here, which, as being somewhat singular, I shall beg leave to mention to you.

A boy,

A boy, about five years of age, having been inoculated with variolous matter upon a cotton thread, his arms suppurated at the usual time, but no fever or eruption ensued. This induced the surgeon who attended him to apply some fresh fluid matter to the surface of the incisions which had been formerly made in his arms, and which were then pretty large. — The application of fresh matter produced no other effect than another suppuration, from which fresh matter was furnished, and with it several others were inoculated, who all had the disease corresponding to the time when the operation was performed. Some weeks afterwards this boy was infected naturally, and had a vast number of small pox.

Here the variolous matter being applied to an inflamed surface, produced matter *sui generis* as usual, but was not absorbed, and therefore did not produce the disease.

If this was really the case, it confirms an idea, suggested by some modern anatomists, that an inflamed surface is a bad absorbing surface.

In our general inoculation it was observed, that the strong and athletic had most fever, and consequently a greater number of pustules

than the weakly or delicate, who had very little fever, and few small pox.

Persons of all ages, from four weeks to sixty years, were inoculated ; and some women who were as far advanced as the sixth month in their pregnancy. Several women also were inoculated who had children at the breast ; and it was remarked that these children had more pustules than their mothers.

Carriacou,

June 12, 1789.



III. *An Account of the good Effects of Mercury in two Cases of impeded Deglutition ; to which is added an Instance of the Relief obtained from the same Remedy in a spasmodic Affection of the Neck of the Bladder. By Mr. Samuel Patten, Surgeon in London. Communicated in a Letter to J. H. Sequiera, M. D. Physician in London ; and by him to Dr. Simmons.*

To Dr. SEQUIERA.

SIR,

THE good effects of the mercurial course recommended by you in the case of Mrs.

Merritt,

Merritt, who laboured under a difficulty of swallowing, having since induced me to have recourse to a similar mode of treatment in another instance of the same kind, which likewise terminated successfully, I take the liberty of transmitting a short account of both the cases to you, with a request that you will dispose of them as you may think proper.

They may, perhaps, serve as a supplement to your paper on this subject in the sixth volume of the Medical Observations and Inquiries; and will probably be deemed the more deserving of attention, as the cases of this sort, upon record, since the publication of the late Dr. Munckley's history and cure of a dangerous affection of the œsophagus*, are but few in number.

I have the honour to be, Sir,

&c.

C A S E I.

In the month of August, 1782, I was desired to visit Mrs. Anne Merritt, of Ratcliffe Cross, a married woman, twenty-two years of age, who, after taking cold, had been seized

* See Medical Transactions, Vol. I. page 165.

with

with a dimness of sight, and a difficulty of swallowing.

Her sight, which, till the commencement of her present complaint, had been perfect, was at the time I first saw her so much impaired, that she could not see to thread a very large needle; and her deglutition was so much impeded, that it was not without great trouble she was able to swallow liquids; but solid food passed down with somewhat less difficulty.

These complaints had begun and increased for some days before I was called to her assistance. I immediately applied leeches to the temples, and blisters behind the ears; but neither these nor the use of laxative and volatile medicines, to both of which I had recourse, with the occasional use of antimonial wine, produced any alleviation of the symptoms.

Her eyes were perfectly clear, but the pupils seemed to be somewhat more dilated than usual, though sufficiently acted upon by the light.

No swelling, or appearance of inflammation, could be discovered in the tonsils or fauces; and the only thing observable about the throat was a fulness, externally, on one side of the neck: this part was frequently rubbed with volatile liniment, but without any good effect.

As

As the different remedies I tried had proved ineffectual, and she experienced great difficulty in getting down the medicines, she determined to lay them aside ; and I suspended my visits for about a week, when I again called on her. She was then so much weakened and emaciated, from not being able to get down nourishment, that her situation appeared to be very alarming.

At this period of the case you was consulted ; and it was agreed to try the effects of mercury in a quantity sufficient to excite and, if necessary, keep up a gentle ptyalism. The *ung. mercur. fort.* was accordingly employed for this purpose ; a pill containing a grain of calomel was at the same time given every night ; and the *ceratum mercur.* spread upon linen was constantly worn by the patient on the fore part of her neck.

This method was pursued during ten days, when her mouth began to be affected, and the symptoms subsided, both the sight and power of swallowing having been gradually restored ; so that at the end of three weeks the patient found herself quite well.

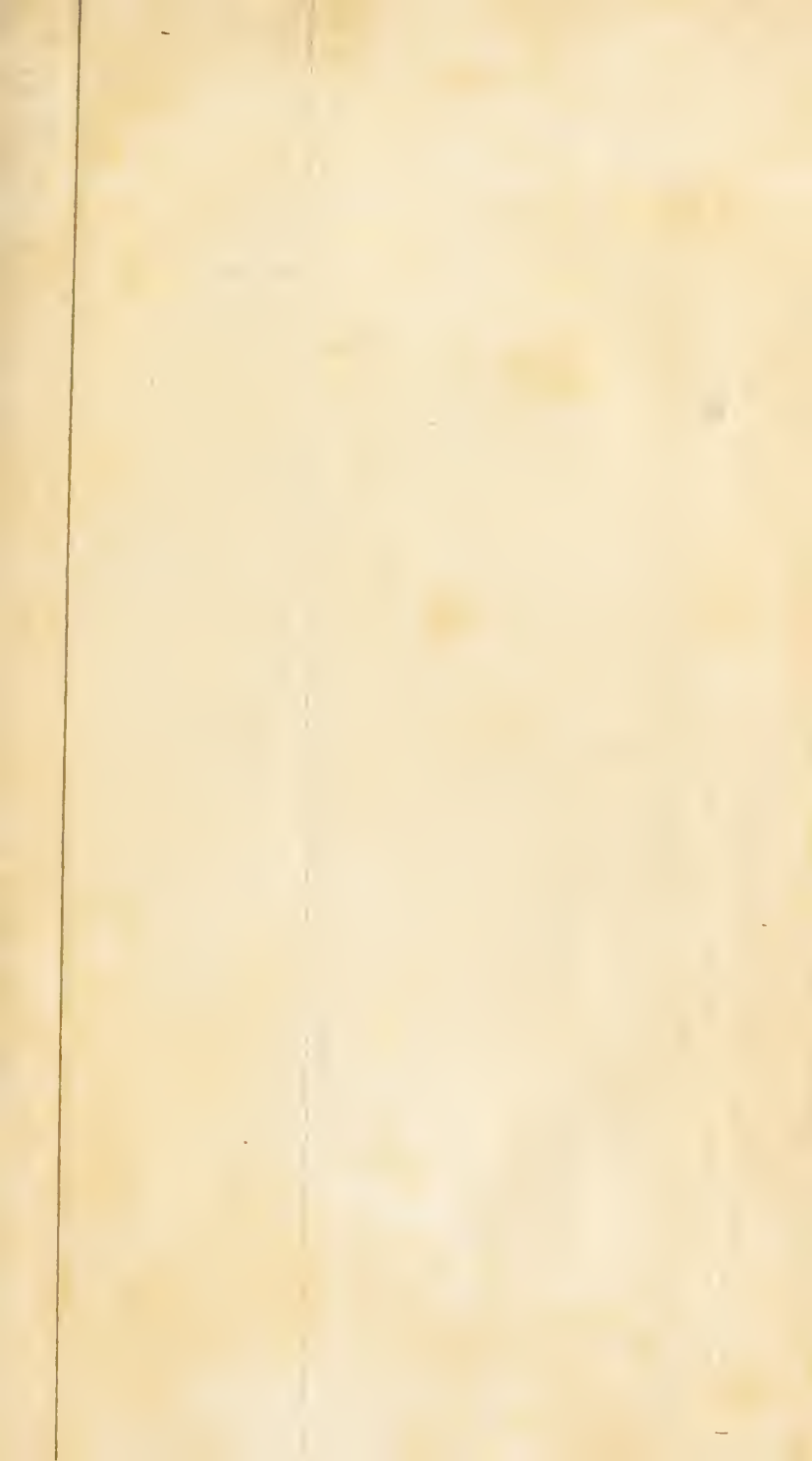
C A S E

C A S E II.

The second instance, in which I had occasion to observe the good effects of a similar mode of treatment, occurred in the month of December, 1782. The patient was a young lady at Stepney, who, after taking cold, began to complain of a spasmodic affection of the œsophagus, which made it very difficult for her to swallow liquids; though any thing solid, by acting against the spasm of the œsophagus, could be forced down with more ease.

No appearance of inflammation was present; and the success that had attended the use of mercury in Mrs. Merritt's case determined me to have recourse to it in this. I accordingly gave her small doses of calomel, which, in the space of about eight days, occasioned a soreness of the mouth, and the complaint then gave way. In this case no ptyalism took place.

I have since that time experienced the efficacy of mercurial remedies in spasmodic affections of the neck of the bladder; particularly in the case of a female patient, in which no marks of inflammation ever appeared, and in which there was not any reason to suspect that a stone was present. An interval of more than
two



The Vesicles of Pemphigus.



two years occurred between the two attacks; and in each of the paroxysms the pain and efforts to void the urine were extremely violent. In the first attack this patient took laxative medicines, and large doses of opium, without any considerable alleviation of the complaint. Calomel was then administered, in small doses, and a gentle spitting was no sooner, by this means, excited, than the disorder gave way. In the second attack I immediately had recourse to the same remedy, and experienced from it the same good effects as before.

Ratcliffe Cross,
July 29, 1789.

IV. *Observations on Pemphigus. Communicated in a Letter to Dr. Simmons by Mr. Thomas Christie, Member of the Medical and Antiquarian Societies of Edinburgh.*

To Dr. SIMMONS.

DEAR SIR,

THE following essay was originally designed to be published as a thesis; but a variety of circumstances having combined to

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disappoint my wishes in prosecuting medical studies, I believe I should not have thought of printing it at all, if the partiality of your friendship had not pledged me to the Public by announcing it in the London Medical Journal *. I must, therefore, request that you will accept of it, and give it a place in that useful publication, as a small testimony of my esteem for and gratitude to the Editor. The external events of life it is often out of our power to regulate or control ; but whatever changes may take place in my future condition, I shall always retain a partial attachment to medical science, and a sincere respect for its worthy professors.

I am, &c.

THOMAS CHRISTIE.

September 1, 1789.

THERE are some diseases to which it is difficult to assign a name, either because they are in an incomplete and unformed state, or because they are so complicated with other maladies, that we may say, with more propriety, that the patient labours under a number

* See Vol. IX. page 310.

of morbid symptoms, than that he is affected with any particular disease. A wish to satisfy the curiosity of a patient or his friends, and some other reasons, such as an immoderate attachment to nosology, a want of sagacity, and a distinguishing spirit, have indeed rendered physicians very fond of bestowing names on diseases, and of comprehending the complaints of their patients under one particular term. Yet it may be made a question, which I shall leave to older practitioners to decide, whether, amongst the complaints that occur in real life, there are not as great a number of this irregular and unfixed kind, as of those to which one can with strict propriety apply the name which distinguishes any regular and fixed disease? Some practitioners indeed save themselves from all difficulty, by describing diseases in such a loose and inaccurate manner, and assigning to them such numerous and various symptoms, that their terms become quite vague and transferable; so that one set of symptoms, according to their way of going to work, may either denote the first species of one disease, the last of another, or the middle species of a third. But this is multiplying words without meaning,

Z z 2

and

and loading the memory without informing the judgment.

The importance of the diagnostic is, that it influences the practical part of physic; for when the physician has decided on the disease, he has recourse to his accustomed mode of cure. It is evident, therefore, that he cannot be too cautious in pronouncing on the first, because the nature of things doth not accommodate itself to our judgments about them; nor can we avoid committing grievous errors, if we take up words instead of facts, and imagine ourselves extremely wise, when in reality we are very ignorant.

Notwithstanding it is thus difficult to decide on diseases, and to apply with propriety a particular term to a class of symptoms, yet it must be admitted that it is often possible; and wherever it is so, nothing can be more desirable.

If the obscurity that attends inward diseases, and the similarity which subsists between some of their symptoms, should render it more difficult and precarious to decide on them, one would, however, imagine, that with respect to external complaints, which offer visible appearances to the eye, it would not be difficult to
determine

determine the disease, and refer it to the class to which it belongs. This is not, however, the case. Cutaneous diseases, though accompanied with eruptions, are as little understood among physicians as any class whatever. This may be, in part, owing to their variety and minuteness; but it is probably more owing to the want of attentive and accurate observation, and to the confounding various and different things under one name.

A remarkable instance of this we have in the word *Scurvy*, which, instead of being confined to one distemper, is, in the common language of mankind, and even in that of many practitioners of physic, applied to denote almost the whole variety of disorders which affect the skin: for what eruption may not be satisfactorily accounted for by saying that it proceeds from a *scorbutic humour* *?

To

* “The term *Scurvy*,” says the judicious Macbride, “is often indiscriminately applied, even by medical people, to almost all the different kinds of cutaneous foulness; and this vague way of speaking is owing to some writers of the last century, who comprehended such a variety of symptoms under this denomination, that there are few chronic diseases but may, according to this scheme, be called a
“*scurvy*.”

To put an end to this confusion and uncertainty, it is necessary that physicians should study the natural history of diseases with the same care that botanists study that of plants, or zoologists that of animals. In cutaneous diseases plates ought to be given; for in such cases the most accurate description falls far short of a good drawing.

Of the great work of Linnæus some one has observed, with a kind of enthusiasm, “*figuris non egubat*,”—“it needed no plates;” which may be admitted, if meant only as a poetical way of describing its extreme accuracy; but cannot be allowed, if intended to convey a sober, philosophical truth. The addition of plates would much assist the justness, and still more the quickness, of the reader’s comprehen-

“*scurvy*.” — Introduction to the Theory and Practice of Physic, 4to. page 615.

In the same loose manner, remarks M. Sauvages, the ancients applied the term *Ophthalmia* to inflammatory complaints of the eyes, from whatever cause they originated, or whatever part of that organ they affected: hence they recommended an hundred different remedies of the most various and opposite kinds for the cure of one disease: and their advices are of no use to us, because we cannot tell in what species of the disease the medicine would be of any service.—*Vide Nosol. Method.* Tom. I. p. 86.

sion of the objects described : and accordingly Linnæus himself, in other parts of his works, and all his successors, have employed themselves in giving views from nature of new plants, as a necessary appendix, even to the best verbal description of them.

It is for this reason that I have judged it proper to accompany the few observations I intend to make on a cutaneous disease, known by the name of pemphigus, with a plate*, copied from nature, in order, if possible, to fix the idea of a disorder, hitherto little understood, and to enable future observers to collect facts relative to it by promulgating an universal knowledge of what is to be described †.

* In the plate, which is annexed to this paper, *a.* refers to a vesicle beginning to make its appearance; *b. b. b. b.* are vesicles of various sizes come to maturity; *c.* is a vesicle burst, and incrusted over; and *d.* refers to the appearance on the skin which lasts for some time after the crust is gone.

† Since I wrote these remarks I have had the pleasure to find that Dr. Willan, an ingenious physician in London, has taken up the same idea respecting the necessity of having drawings made of the appearance of cutaneous diseases which I have so strongly recommended in this paper. He has indeed proceeded a great way in executing this plan, and I hope will soon favour the Public with a splendid work on the subject.

A minute

A minute detail of the obscure opinions of remote ages, relative to the disease before us, would rather serve to display learning than to produce any useful consequence. I shall, therefore, begin with M. Sauvagès, the publication of whose excellent nosology forms an æra in medical history; and I shall only notice earlier writers as they have been referred to or quoted by him.

Sauvages places pemphigus amongst the *exanthematicæ*, or eruptive diseases, which constitute the first order of his third class*, and thus defines it.

“ PEMPFIGUS, *pemphigos & pemphigodes pure-*
 “ *tos* Galen. 6^a epidemiar. *hydroa* Car. Pisonis;
 “ sic dicta a *πέμφιξ*, bulla vel phlyctæna;
 “ bullosa febris, novell. class. fièvre vésicu-
 “ laire †.”

In the last edition of Dr. Cullen's Synopsis Nosologiæ Methodicæ it is placed in the first class (pyrexia); order iii. (exanthemata); gen.

* Morbi Inflammatorii seu Phlegmasiæ.

† Vide Nosol. Method. 4to. Amstel. 1768. Tom. I. p. 430.

34, and is defined “ typhus contagiosa,” a contagious low fever*.

Dr. David Stewart, physician in Aberdeen, met with one case of it in the hospital there, and published an account of it in Dr. Duncan’s Medical Commentaries for the year 1778, page 79.

Burserius, a learned and judicious physician at Milan, in the second volume of his *Institutiones Medicinæ practicæ*, printed in 1785, treats of pemphigus amongst the febrile exanthemata.

Since that time Dr. Stephen Dickson, professor of physic at Dublin, has published a very interesting paper on this subject in the first volume of the Irish Transactions, page 47.

From these five sources I shall collect what is known relative to the history of this disease, comparing the different accounts together, interspersing my own observations, and adding an account of a case that occurred at the Westminster General Dispensary in May, 1788.

In this disease, says Sauvages, “ the inflammation is for the most part acute, and is

* Vide Synopf. Nos. Meth. Ed. 4. 8vo. Edin. 1785. Tom. II. p. 148.

“ attended with an eruption of large pellucid
 “ blisters or vesicles, filled with a yellowish
 “ serum, and scattered over the skin. It dif-
 “ fers greatly from the miliary fever, in which
 “ there are indeed vesicles, but not larger than
 “ a grain of millet; and also from the variola
 “ crystallina (chicken pox), where the vesicles
 “ are filled with pus, or formed by the junc-
 “ tion of several small pustules into one large
 “ one. In pemphigus the vesicles are about
 “ the size of an hazel nut, sometimes larger,
 “ rarely less, and filled with a serum of a light
 “ yellow colour.

“ I am pretty certain,” he adds, “ that this
 “ is a new disease, as no distinct account of it
 “ occurs in the Greek or Arabian writers; how-
 “ ever, it is not so rare, but that I have met
 “ with six cases of it.”

Of the opinion that pemphigus is a new dis-
 ease I should be inclined to doubt. The disease
 may not be new, although we have no accounts
 of it preserved in the ancients. There were
 few among them who were accurate observers;
 little had then been done in distinguishing simi-
 lar diseases from each other; many of their
 works have not come down to us, and in those
 we have there are several diseases whose name
 alone

alone is known to us, but of whose nature we are either uncertain or altogether ignorant *.

Hippocrates, in the sixth book of his epidemics, mentions Πυρεται̃ πεμφυγώδεις, translated, in the edition of Charterius, *Febres acutæ*; and Galen, in his comment on this passage, gives different senses to the word, and takes notice of πυρεται̃ μετὰ φλυκταινων, febres cum tuberculis.—Hippoc. et Galeni, Op. ed. Charterii, fol. Tom. IX. p. 382 †.

But it is not sufficiently clear what disease was meant by these ancient writers, and therefore nothing can be built on this ‡.

The

* This fact was well known to M. Sauvages himself, and he adduces it as a proof of the necessity of an accurate description of diseases in his address *Lectori Philiatro*: — “ Frustra
“ nominantur morbi, nisi descriptione fixa determinantur:
“ descriptionis defectu ignoramus hactenus quid sint morbi
“ plurimi ab Hippocrate nuncupati, ut *typhus, pachy, awante,*
“ *phrontis, phoenicie, leuce, hippouris, pherea*; quid Plinii *ge-*
“ *murfa*, aliique innumeri:” and, he adds, as another instance of the vague manner in which the ancients spoke of diseases, that we cannot tell with certainty what is meant by the morbus Scitharum of Hippocrates, by the magni splenes, morbus niger, and morbus rusticus.—Nosol. Method. I. 86.

† See also the Oecon. Hippocr. by Foesius, p. 297.

‡ “ Verum quid hoc nomine intellexerit Hippocrates, nec
“ Galenus in commentario certo definire ausus est, nec alii

The first species of it Sauvages calls *pemphigus major* of Christ. Seligerus, the hydatides of C. Piso (Obs. 147, 149), the vesicular catarrhal fever of Delius (*amoenitates medicæ*), and says it is accompanied with constant acute fever, on the second or third day of which the vesicles arise; that, when they break, they are succeeded by large dark red spots, with black edges; and that the disease lasts about a fortnight. He had met with some cases of it in the hospital, and in two there was no fever. One of the cases that occurred to him was fatal.

On this Dr. Cullen observes, that every degree of credit is due to what M. Sauvages mentions, from his own experience, or from Piso; but nothing to the authority of Seligerus, “*tenuis certe judicii hominis.*”—(Synopsis. Nos. Meth. T. II. p. 149.)

Piso, says Dr. Dickson, (Irish Transactions, page 49) accurately describes the genuine pemphigus in the case of Egmont de Rinach. He terms it hydatids, and says it occurred to him

“*interpretes satis explicarunt. Hinc jure adhuc inter eos disceptatur.*”—Vide Burserii Instit. Med. Pract. Tom. II. p. 115.—He refers for farther information to Caspar a Rejes Elys. jucund. quæst. camp. Quæst 68. n. 7.

frequently ;

frequently ; but the Doctor suspects he confounded it with the chicken pox, and with several erythematous affections ; adding justly, that though an industrious observer and candid man, he was not an acute nosologist.

To this first species Dr. Cullen refers the *exanthemata serosa* of Piso, Obs. 150, and the *febris pemphygodes*, Ephem. Germ. D. I. A. VIII. Obs. 56.

The second species mentioned by M. Sauvages is the *pemphigus castrensis*, or camp pemphigus, described by M. Thierry, a French physician, who says it raged at Prague in 1736, and baffled all the art of physic, till some one (whom M. Thierry styles a great practitioner) suspecting that the vesicles were analogous to those produced by a blister, and took their origin from an acrid ferment, (for such was the language of the times) prescribed bezoartic vinegar to the sick, and recovered them all, while the other physicians lost almost every patient *.

On

* “ Il regnoit en 1736, une maladie fort contagieuse à
 “ Prague ; les ressources et les reflexions de la faculté étoient
 “ épuisées. Toutes les methodes echouoient contre la fero-
 “ cité du mal. Un grand praticien de cette ville, qui n’étoit
 “ pas

On this relation Dr. Cullen justly thinks that no dependence can be placed. So violent a disease cured infallibly by so impotent a remedy, “*meam fidem omnino superat*,” says he. Indeed if we acquit the veracity of M. Thierry, we cannot at least pay any compliment to his judgment.

To this species Dr. Cullen refers the *febris syncches, cum vesiculis per pectus et collum sparsis*, of Dr. Morton, App. ad exerc. ii. Burserius, however, doubts whether Morton’s fever, which he has only mentioned, but not described, can be referred to this disease.

The third species noticed by M. Sauvages is the *pemphigus Helveticus*, or Swiss pemphigus of Dr. Langhans, (*Acta Helvetica*, Vol. II. page 260, and in *Beschreibung des Siementhals*, Zu-

“ pas plus avancé que les autres, considerant un jour les vesi-
 “ cules qui s’élevoient sur la peau, (j’en ai vu d’aussi grosses
 “ que des noisettes) il trouva qu’elles ressembloient a celles
 “ que forment les vésicatoires ; il soupçonna que le ferment
 “ acré qui dominoit dans les humeurs, pouvoit être du même
 “ caractère que celui que fournissent les mouches cantharides ;
 “ d’après cette idee, il ordonna le vinaigre bezoardique à ses
 “ malades, et les sauva tous, tandis qu’il n’en échappoit pres-
 “ que aucun entre les mains des autres medecins.”—*Medecine*
Experimentale, ou resultat de nouvelles Observations pratiques
 et anatomiques. 8vo. Paris, 1755, p. 134.

rich,

rich, 1753) an epidemic disease, which began in Switzerland towards the end of winter 1751, and raged violently : it was attended with nausea and a cold, but no hot fit. The pustules chiefly affected the throat, both internally and externally, though they appeared also on other parts of the body. They were of the size of a nut, and, when opened, discharged a foetid yellowish ichor. This disease was often fatal.

Dr. Cullen calls it an ambiguous disorder, and thinks that perhaps it was nothing more than a malignant sore throat : however, I am inclined to regard it as a species of the true pemphigus.

To this species Dr. Cullen refers the vesicatory fever of Macbride, (Meth. Introd. to the Theory and Practice of Physic, page 389) whose account contains nothing more than has been already communicated to the reader.

The fourth species enumerated by M. Sauvages, and to which he refers the *bullosa febris cum dysenteria* of Morton, (Pyretolog. Append. p. 163) is the *pemphigus Indicus*, or Indian pemphigus, a name he gives to a disease mentioned by Bontius in his Treatise de Medicina Indorum; but upon looking into that work I find in it nothing more than a brief account of a
single

single and fatal instance of what the author calls an ardent fever, attended with dysentery and an eruption of pustules and vesicles on different parts of the surface of the body. These vesicles are said to have been filled with a greenish pus, and to have terminated in malignant ulcers; but the description* given of them is too imperfect to enable us to form any accurate idea of the real nature of the disease.

The fifth and last species mentioned by M. Sauvages is the *pemphigus Brasiliensis*, the pemphigus of Brazil, said to be occasioned by touching a serpent found in that country; and for an account of which he refers his readers to Father Bougeant's *Observations curieuses sur la Physique*, Tom. I., published in 1730. Of

* “ *De febre ardenti, dysenteria, ulceribus malignis, &c.*
 “ *Obs.* — Reverendus ac doctissimus vir Joannes Cavallerius,
 “ verbi divini præco, correptus est febre ardente, superveniente
 “ dysenteria atrabiliaria, quæ cum per aliquot dies
 “ continuasset, eruperunt sub axillis, in tergo circa lumbos,
 “ et in inguinibus, etiam in collo, pustulæ ac vesicæ quædam,
 “ plenæ ac distentæ pure viridi, et subjectam cutem ad carnem
 “ usque erodente, quæ nobis, prima facie, spem criseos faciebant:
 “ sed dysenteria non cessante ac febre, cum phrenitide
 “ ingravescente, profissimus simul, ac doctissimus juvenis,
 “ ex hac vita ad cælos raptus est.” — *Vide Bontii Obs. de*
Medicina Indorum. 4to. Parisiis, 1645. p. 38.

this

this species, however, nothing certain can be concluded.

Dr. Cullen's definition of pemphigus is as follows* :

“ Typhus contagiosa. Primo, secundo, aut
 “ tertio die, in variis partibus vesiculæ, avel-
 “ lanæ magnitudine, per plures dies manentes,
 “ tandem ichorem tenuem effundentes. — A
 “ contagious low fever. On the first, second,
 “ or third day, vesicles of the size of a hazel-
 “ nut appear on various parts of the body :
 “ they remain for many days, and at last pour
 “ forth a thin ichor.”

The Doctor owns, that as he had never met with a case of the kind himself, and found little about it in the writings of physicians, he had been obliged to take almost his whole account from Sauvages. He makes some remarks, already noticed, on the authorities cited by that author ; seems to think pemphigus, in all cases, a symptomatic disease ; and adds, in a note, that, since he wrote them, Dr. Home had brought a man to him who was slightly feverish, and had had an eruption, first on his arms, and then over all his body, of pustules of

* Vide Synops. Nosol. Method. Tom. II. p. 148.

the size of a nut, filled with a watery humour, which in two or three days broke and healed up. He adds, that this fever assumed no particular type, and soon went off, not being at all contagious.

The *synonyma*, according to Dr. Cullen, are to be found in the *pemphigus* of Sagar, the *morta* of Linnæus, and the *febris bullosa* of Vogel. From their accounts, however, nothing can be added to what we have already given.

We come next to the case related by Dr. Stewart, the subject of which was a soldier of the seventy-third regiment, who was received into the hospital at Aberdeen. He had been afflicted three weeks before with the measles, which, on the second day of the eruption, had suddenly disappeared in consequence of his having been exposed to cold; and ten days after he perceived, on the inside of his thighs, an eruption of small red spots, which, increasing in size, became filled with serum, and gradually spread over all the skin. Some of these vesicles discharged pus, and others a bloody ichor. The patient was besides affected with sickness, lassitude, oppression about the præcordia, thirst, sore throat, with difficulty of swallowing; his tongue was foul; his skin hot and feverish; his

his pulse beat from 110 to 120 strokes in a minute; he was costive; and his eyes appeared languid.

Dr. Dickson, who has taken notice of this case in his observations on pemphigus, thinks we may infer from it that the nature of the fluid contained in the vesicles, though at first a pure serum, may be so altered in the course of the disease, by its own fermentation, or admixture with other fluids, from their vessels being broken down, as to cease from being a diagnostic of the disease.

Burserius devotes the second volume of his *Institutiones Medicinæ practicæ* to febrile exanthemata; and in the seventh chapter of that volume we find him treating *de pemphige recentiorum sive morbo phlyctænoide*.

I had finished my observations on this disease in MS. before I had an opportunity of consulting his work. I was, therefore, much pleased to find that he agreed with me in dividing the disease into two kinds only. The first, he says, is mild, either without fever, or with a very slight degree of it, the pustules rising from the first to the fourth day, and going off before the seventh; while the last is malignant, often epidemical and contagious.

He does not venture to affirm that the disease is always mild, even when without fever; and relates the case of an old man who was suddenly seized with an eruption of large watery pustules, and, without fever, died in a few days.

The pemphigus Helveticus, he thinks, was either another disease, or at least complicated with angina. The last is most probable. He contends that pemphigus is not by any means always symptomatic, and that no case of it is without danger, as the tendency to putrefaction is constantly very considerable.

Dr. Dickson begins his "Observations on Pemphigus*" with remarking, that it is a disease of rare occurrence. This may be partly true; but I apprehend it has not hitherto been sufficiently known to be observed when it did occur. He proposes to alter Dr. Cullen's definition in the following manner:— "A fever, accompanied with the successive eruption from different parts of the body, internal as well as external, of vesicles about the size of an almond, which become turgid with

* See the Transactions of the Royal Irish Academy, Vol. I. 4to. Dublin, 1787; and the ninth volume of this work, page 309.

“ a faintly

“ a faintly yellowish serum, and in three or
 “ four days subside.” — From this definition it
 is evident he differs from Dr. Cullen in five
 points.

1. He is by no means convinced that the disorder is contagious.

2. He finds that new vesicles arise, not only on the first, second, or third, but on every day of the disease.

3. He has never known them to remain many days.

4. The fluid they contain does not appear in general to be an ichor or sanies, but a bland, inodorous, insipid serum. And

5. Instead of being poured out, it is most commonly absorbed into the system.

Six cases, it seems, have occurred to Dr. Dickson, two of which he has particularly described. The first was that of a woman under the care of Dr. Gregory in the Infirmary at Edinburgh in 1783. In this patient the menses had been obstructed for two years and a half,
 “ during which period she had been thrice
 “ before attacked with the same disorder, which
 “ had each time supervened upon a vomiting
 “ of blood. Her skin was generally cool, and
 “ her

“ her pulse, though weak, never much increased
 “ in frequency.”

The next is that of a married lady in Ireland, aged twenty-three, who, after being ill during fourteen days of a low fever, was seized with pains in her back, head-ach, and sickness. The next day her pulse became frequent, and she complained of a sore throat. On the third day she complained of a smarting, tingling kind of pain in her tongue and inside of her mouth. She was thirsty and costive, and had her taste vitiated. On the fourth day a pellucid vesicle of about an inch long, and half an inch broad, turgid with a faintly yellowish fluid, appeared; a smaller one appeared on the inside of the left cheek. On the fifth, sixth, and seventh days the symptoms continued; new vesicles appeared externally on the cheek and neck; and she had no sense of taste. On the eighth the vesicles on the tongue and mouth disappeared. The whole inside of the throat continued painful, and deglutition difficult. On the ninth the cuticle on the parts formerly occupied by vesicles within the mouth, cracked and peeled off, leaving the parts beneath raw and sore. Deglutition had now become so painful, that she refused medicine, food, and even

even drink. On the tenth new vesicles appeared on the abdomen. On the thirteenth she vomited some blood along with a dose of the bark ; several vesicles of the size of a pea arose on the hypogastric region of the abdomen, one on the labia pudendi, and two on the left thigh. On the fourteenth she had two loose stools, much intermixed with blood, and complained of great soreness of her belly, increased by pressure. After the fifteenth she recovered daily.

Dr. Dickson observes, that no former author has mentioned the circumstance of the vesicles taking possession of the *internal* parts of the body, and proceeding in succession, some rising whilst others decayed, through the whole surface of the alimentary canal.

If, however, we admit the disease described by Dr. Langhans to be a species of pemphigus, which I think we must do, as it was attended with febrile symptoms, and the pustules appeared on every part of the body, and were of a large size, it will follow that this circumstance was observed first by him ; for he says that the vesicles attacked the fauces, pharynx, and, as it would seem, other parts also ; and that the event of the disease depended upon

the patient's constitution having power enough to throw out all the matter from the internal to the external parts of the body. Indeed I apprehend that the appearance of the vesicles on internal parts denotes only a more virulent state of the disease, such as was that in Switzerland described by Dr. Langhans, and that in the two cases mentioned by Dr. Dickson. In its mild form the disorder attacks only the small vessels of the external skin, which, owing to some peculiarity of their structure, or rather to their distance from the seat of life, are more exposed to its influence. This is analogous to what we observe in other cases. Mr. Hunter observes, that the skin and cellular membrane are extremely susceptible of the suppurative stage of inflammation, but that internal and deep-seated parts resist it long: hence extraneous matters taken into the stomach, though they irritate and inflame, seldom occasion suppuration; and when, by their acuteness or gravity, they pierce through, as in the case of pins and bullets, the suppuration does not take place till they come near the surface of the body. The wisdom of this law of nature is evident; for if every irritating cause could produce suppuration in the internal parts as easily as it does

at

at the surface, a most numerous and fatal train of evils would be the consequence.

I come now to describe a case which I myself had an opportunity of observing at the Westminster General Dispensary, and which, though of a milder nature, was a decided case of pemphigus.

The patient, Hannah Scott, aged thirty years, and servant to Mr. David Jones, of Little Vine Street, Piccadilly, was admitted, under the care of Dr. Simmons, on the 17th of May, 1788. She had, for three months, been occasionally subject to sickness at the stomach and head-ach, attended with a sense of weakness and lassitude. About a fortnight before she was admitted at the Dispensary the sickness had increased, she had become feverish, and some pustules had begun to appear on the fore part of her left arm. At first they had very nearly the appearance of the small pox. By degrees they became larger, and were filled with a watery yellowish liquid. The exertions she was obliged to make at her work used to burst them; but after discharging their contents they very often filled again in the course of a night; and this process was repeated several times. New ones also appeared; and on

the day we first saw her at the Dispensary she had one vesicle, as large as a nut, on her right shoulder, one at the pit of the stomach, one near the point of the little finger, and about twelve on the arm : they were very sore, and the skin around them was a good deal inflamed. She thought her complaints a little relieved since the eruption : however, she was still weak and feverish, her tongue was whitish, and her pulse 120. Dr. Simmons, who pointed out the disease to me as a clear and striking instance of pemphigus, prescribed three grains of calomel to be taken at night, and an ounce of Glauber's salt in the morning.

May 22. Her occupations in the family had prevented her from calling at the Dispensary ; there was, as yet, no alteration in her complaint ; and as the menses (which had returned pretty regularly during the whole of her illness) began this day, she was unwilling to take any more medicines during their continuance.

May 24. We saw her again, but no change worth noticing had taken place. The menses still continued.

May 26. Fresh pustules were to be seen in different parts, especially on the leg. Some of the former ones, when they broke, had dis-

charged a yellowish fluid tinged with blood. As she complained of sickness and head-ach, and her pulse was still at 120, she was directed to take two table-spoonfuls of a mixture composed of two grains of emetic tartar and an ounce of Glauber's salt dissolved in eight ounces of water, and to repeat this dose, at proper intervals, till it should operate by stool.

May 28. Several stools had been procured by the medicine last prescribed. The sickness and head-ach had subsided; but the pulse was still at 110. She was directed to repeat the antimonial purgative on the 29th.

June 2. The pustules on the arm, after breaking, had mostly healed up, after being covered with a crust or scale. The new cutis appeared darkly reddish and glistening. Two new pustules appeared on the ankle. She was ordered to repeat the calomel and Glauber's salt.

June 6. A pustule appeared on the lip; but, after the strictest inquiry, I could not find she had had any on the tongue, inside of the mouth, or any internal part.

June 9. She was evidently a good deal better. The pulse was now reduced to 100, and the vesicles were going off. She was directed to repeat the calomel and Glauber's salt.

June 11. She continued better. The medicines were repeated.

June 27. Nothing particular had occurred till this day, when she had an eruption of small pimples, which might perhaps be considered as a proof of her being cured, as they shewed that the specific action of the vessels of the skin was changed. Her pulse was now reduced to 88, and she was free from complaint; but the calomel and Glauber's salt were, at her own request, again repeated. After this she took no more medicine, and on the 4th of August, when she came to the Dispensary to return thanks, she was in perfect health.

As this patient slept alone, and was the only maid servant in the family, we could not judge from her case whether the disease be contagious or not. M. Sauvages says nothing with respect to this. Dr. Cullen terms it a contagious low fever. Dr. Stewart observes, that no person laboured under the same complaint as his patient, either in the part of the country from which he came, or during his residence in Aberdeen. Dr. Dickson is of opinion that it is not infectious, because all the well-attested cases of it are solitary instances; and, to confirm his opinion, I shall mention, that, so far as I could learn,

learn, no person in the neighbourhood was affected with pemphigus at the same time as Hannah Scott, nor did she communicate it to any one.

It appears, however, that the pemphigus Helveticus of Dr. Langhans was extremely infectious; for he says that as soon as one of a family took it, all the rest became affected in a short time. This circumstance may lead us to a new division of the species of the disease, and, instead of the *pemphigus major, castrensis*, and *Helveticus* of M. Sauvages, we may consider the disease as existing only under two forms, that of *pemphigus simplex* and *complicatus*, where it is combined with sore throat, or some other malignant disorder. Both of them, and especially the last, seem to vary much with respect to mildness and malignity.

The division I have made of pemphigus, into two kinds, corresponds exactly with Dr. Cullen's definition of another cutaneous disease, the scarlatina, which he has described as existing in two forms; one simple, when there is only an efflorescence on the skin; and another, which he calls *cynanchica*, and Dr. Withering *anginosa*, when it is attended with an inflammation of the throat.

I trust

I trust it will not be alledged that I have simplified the matter too much by reducing the disease to two kinds. The facts, when properly considered, seem to me to lead fairly to such a conclusion. In other respects, I own, I am somewhat inclined to prune the branches of nosology; first, because minute distinctions in the history of diseases tend to little practical use, the treatment being generally nearly the same; and, secondly, because the varieties observable in them are often more the effect of different constitutions than of a different disease.

Before I conclude the history of the disease, I shall remark, that there are other eruptive disorders which may be mistaken for pemphigus. Sauvages says we may distinguish it from the miliary fever and chicken pox by the larger size of the pustules, and their containing only serum. It appears, however, that in the course of the disease they sometimes contain pus. Dr. Cullen mentions, that, after he had written the observations, we have just noticed, on this disease, his colleague, Dr. Home, sent a man to him who had a slight fever, and an eruption of large vesicles, first on his arm, and then on other parts of his body. The fever shewed no
peculiar

peculiar character, was not contagious, and after two or three days the vesicles burst, and, having poured forth a watery fluid, healed up. Very probably this was a slight case of what I have called pemphigus simplex.

A case occurred to Dr. Dickson, when at Edinburgh, of a woman who had some vesicles on the eyelid and eyebrow, which led Dr. Gregory to suppose that it was a beginning pemphigus; but as she never was affected with any degree of fever, Dr. Dickson considered it as merely a local complaint. It was cured in a few days.

Soon after Hannah Scott came to the Dispensary we had another patient, a young woman aged seventeen, whose case I thought at first might perhaps be pemphigus. After a fortnight's illness she was affected with headache and sickness, which were followed by an eruption of pustules, filled with pus, on her arms, but chiefly on her shoulder and left breast; however, I became convinced that I was wrong; for although one or two of the pustules resembled somewhat, in size and appearance, those of pemphigus, the most of them were very small, became confluent, and
after

after bursting never filled again : besides, after the eruption, her general health was very good.

Of the Treatment of the Disease.

“ The general symptoms of weakness and
 “ tendency to putrefaction,” says Dr. Dickson,
 “ obviously point out the proper treatment.
 “ When the vesicles seize on the inward parts,
 “ irritation must be guarded against by opiates,
 “ demulcents, and gentle laxatives ; nourish-
 “ ment must be supplied, and the grand reme-
 “ dies, bark and wine, especially the last, must
 “ be sedulously administered.”

Burserius recommends acids and antiseptics, particularly the Peruvian bark. He would open the pustules, lest the acrid humour should penetrate farther : but he agrees with Vogel in prohibiting medicines which repress or dry up the humour. When complicated with sore throat, he directs the remedies used in that disorder to be applied to.

Dr. Stewart snipped the largest of the vesicles, and dressed them with ung. e lap. calamin., and prescribed an emetic consisting of a solution of antimonial tartar, which also procured the patient two loose stools. For drink he recommended water gruel acidulated with
 lemon

lemon juice. Next day he ordered half an ounce of a mixture, of two parts of decoction of Peruvian bark and one part port wine, to be taken every three hours. As this seemed to agree with the patient's stomach, the bark in powder was afterwards tried, and half a drachm given every three hours in an ounce of port and water. By this treatment, in about fourteen days, he got quite well.

Dr. Dickson, in his first case, obtained a cure by a liberal use of bark and wine. The second was a much more difficult and dangerous case. The Doctor began with an emetic, and directed the patient to bathe her feet in warm water. Finding her costive, he ordered a clyster, and then gentle laxatives. When her throat became sore, he used tincture of roses as a gargle. Soon after he tried the bark, changed the tincture of roses for an emollient gargle, and recommended imperial for common drink. The patient, however, after being a little relieved, grew worse again, her breath became foetid, she lost the sense of taste, and even had some degree of delirium. He then ordered an ounce of decoction of bark and half a drachm of salt of tartar to be taken every two hours, and immediately after it half an ounce of the

same decoction mixed with six drachms of lemon juice ; with cyder and porter for common drink. When it appeared that the vesicles had taken possession of the lower parts of the alimentary canal, by her discharging a little blood both upwards and downwards, he had recourse to castor oil and anodyne clysters. In three weeks from the time Dr. Dickson began to attend her she got well of the disease, and had no complaint but weakness, which a little country air completely removed.

In the case of Hannah Scott, at the Westminster General Dispensary, we pursued, as the reader hath seen, a different plan, and the good effects of it were very obvious. The antimonial cathartic, by evacuating the bowels and favouring the determination to the skin, soon removed the sickness and head-ach ; and the patient from the first felt herself relieved by the operation of the calomel and Glauber's salt.

The other species of the disease, which I have called pemphigus complicatus, is no where mentioned but in the description of Dr. Langhans already noticed. After bleeding the patient freely once or twice, they applied a large blister to the forehead, and surrounded the neck with a poultice of bread and milk, which was removed

removed every two hours. At the same time they prescribed diaphoretics to be taken internally, and when the patient began to recover he was purged with Epsom salt.

V. *A critical and anatomical Examination of the Parts immediately interested in the Operation for a Cataract; with an Attempt to render the Operation itself, whether by Depression or Extraction, more certain and successful.* By Silvester O'Halloran, Esq. M. R. I. A. Honorary Member of the Royal College of Surgeons in Ireland, and Surgeon to the County of Limerick Hospital. — From *The Transactions of the Royal Irish Academy*, 1788. 4to. Dublin.

Nullius in verba, in verba magistri. HOR.

THOUGH it has been unanimously agreed on, by both ancients and moderns, that the cataract is an opaque body immediately behind the pupilla, opposing the passage of the rays of light to the bottom of the eye; and that the cure of this disorder consists in removing

ving this opacity; yet the part immediately diseased has been for about a century the subject of much controversy, whilst the operation itself, the most essential point of inquiry, seems as uncertain now as it was a thousand years ago, notwithstanding the boasted improvements of M. Daviel, and other moderns.

The ancients supposed that the crystalline lens was the principal seat of vision, which they agreed to place in the centre of the eye; that the space between it and the bottom of the eye was filled by the vitreous humour, and that the aqueous humour occupied the anterior part of this organ. As the iris intersected this last space, they agreed to call anterior, or outer chamber of the aqueous humour, the parts between it and the cornea *transparens*; and posterior, or inner chamber, what remained between the crystalline lens and it. The cataract, it was affirmed, was a web or membrane formed immediately behind the pupilla, in this posterior chamber, and far removed from the crystalline, not unlike a scum that is sometimes found on the top of bottled liquors not well corked. But as experience proved that people, after the removal of this opaque body, by no means saw with that distinctness that might be expected,

and that theory and practice might go hand in hand, this phænomenon was accounted for by observing, “ that in the formation of this scum,
 “ or membrane, the most dense parts of the
 “ aqueous humour were engaged, the remain-
 “ der of this liquor was therefore rarer, or less
 “ enabled to cause a convergence of the rays of
 “ light, and sight must of course be propor-
 “ tionably weaker.”

Towards the decline of the last, but particularly since the commencement of the present, century, repeated dissections and observations made it but too evident that the cataract was not a membrane, but the crystalline lens itself, that was rendered opaque. Numbers of cases, and many works, were published, from time to time, to corroborate this fact, which were violently opposed by the partizans of the former doctrine: the chief of their arguments, and, for the time, the most difficult to be answered, was this—“ It is an acknowledged fact that the
 “ crystalline is placed in the centre of the eye;
 “ but every oculist knows that the opaque
 “ body to be removed lies immediately behind
 “ the pupilla; therefore it must be a mem-
 “ brane between the crystalline and iris.”—
 This put the advocates for the new doctrine

on

on a closer examination of the structure of the eye, in which Brisseau, Maitre Jean and St. Yves, but more particularly Heister, Morgagni, Petit, and Winslow, bore distinguished parts. Every new inquiry contributed to advance the seat of the crystalline more forward, till at length, in the year 1729, Doctor Petit published a letter* in answer to some remarks of Hequet's, in which he demonstrated that the crystalline was so near the pupilla that it was impossible to introduce a cataract needle between it and the iris without wounding it: and to make clear to every conception this fact, he gave with this letter a figure of the eye, more correct than any that had yet appeared. Still he kept up the distinction of the different chambers of the eye, and in this figure determined their limits, which have been carefully noted by all subsequent writers. But that moderns should appear no more defective in point of theory and optics than the ancients, the limited sight that followed the operation was accounted for by observing, " that the crystalline
 " is a denser medium than either the aqueous
 " or vitreous humour, and of course, by its

* Sur la vrai situation du Cristalin.

“ removal,

“ removal, sight should be proportionably
 “ weaker.”

*Anatomical Observations on the Structure of the
 Iris, Situation of the Crystalline, &c.*

After names so respectable and truly great as those of Heister, Petit, Morgagni, and Winslow, one would naturally imagine that nothing with respect to the structure of the eye was left unexplored; yet, from the following account, it will appear that much was still wanting. I shall not enter into a general description of the eye, but on the present occasion confine my remarks to the parts immediately interested in the operation, and to the errors committed in the description of them. And first; much confusion has arisen on account of the two chambers of the aqueous humour, and very reprehensible mistakes in the description and delineation of the iris: the iris is generally supposed to take its rise from the sclerotica, at its junction with the cornea transparens; but though this is exactly the case at the middle of the superior and inferior parts of the eye, as it lies in the orbit, yet the adhesion of the ligamentum ciliare gradually falls back on the sclerotica as it advances towards the two canthuses, inasmuch

infomuch that here the origin of the iris is a mathematical line, posterior to that of the cornea transparenſ; a remark of great conſequence to the operation, but particularly to the extraction of the cryſtalline. To prove this, if you remove the cornea transparenſ at its junction with the ſclerotica, you will evidently ſee that the cloſe adheſion between this laſt and the choroides, called ligamentum ciliare, is exactly as deſcribed. The uvea, or iris, is alſo repreſented as proceeding exactly flat, from the edge of the ſclerotica to its aperture called the pupilla; yet if we look into an human eye, or into that of any animal, we ſhall clearly ſee that the iris, ſo far from being flat, is very convex, and that this convexity is greateſt at its ſides. If beſides viewing cloſely the eyes of living animals, we examine through the cornea of inanimate ones, we ſhall perceive the ſame appearance. Certain it is, that after cutting off the cornea lucida, the ſituation in which the eye is placed being moſtly on its poſterior extremity, makes the whole eye, and of courſe the iris, appear flatter than they really are; but a little reflection, and an alteration in the poſition of the parts, will ſoon prove the fallacy of this appearance; for placing the ſides of the eye nearly

horizontal,

horizontal, (according to their natural situation) you will quickly see the iris assume a much more convex appearance, provided in removing the cornea you have not injured the crystalline capsula, even though the loss of this cornea should have made the parts less compact.

Indeed, from the days of Galen, the convexity of the iris was never doubted, till Vesalius first pretended to controvert this truth; and all the figures given of it by former anatomists and opticians have so represented it, notwithstanding that they agreed to place the crystalline in the center of the eye. But since *Monf. Petit* (already quoted) has affirmed that the iris is flat, and as such has represented it, he has been in this error followed by subsequent writers; yet that it is an error, and with respect to the operation of extraction a very alarming one, will appear from the following exact description:

The vitreous humour occupies all the posterior and anterior part of the eye as far as the iris, leaving a small socket or cavity in its anterior part for the lodgement of the crystalline lens. It is said to be covered by a fine membrane, called *tunica vitrea*; but for my own

part, who have dissected as many eyes, and of different animals, as I believe any man, I confess I have never been able to trace any membrane surrounding it except in its anterior part, and there it is covered very sensibly and very remarkably. Leaving then the description of this tunica vitrea to those that can find it, I shall observe, that when the vitreous humour reaches the iris, there is a close adhesion between them by the intervention of a firm pellucid membrane arising from the inside of the choroides, exactly opposite to that part where the adherence between this last and the sclerotica commences, called *ligamentum ciliare*. This membrane covers all the anterior part of the vitreous humour; but when it reaches the socket or cavity in which the crystalline is contained it separates; the posterior, and by much the finer part, lines this socket, whilst its anterior one covers the crystalline, so that it becomes enclosed in it as a nut is in its shell. Thus the crystalline is enclosed in a fine pellucid membrane; which capsula is constantly humected with a transparent liquor, which prevents any kind of adhesion or connexion between it and this interposed body. The anterior part of this capsula is so dense as to be sometimes

sometimes capable of being separated into two distinct coats; the contained liquor is, from its discoverer, called Morgagni's liquor.

I have said, contrary to all anatomists, that the inside of the iris adheres closely to the anterior part of the vitreous humour, except where it opens for the lodgement of the crystalline; and the better to comprehend this fact, I shall give a new description of the iris. With other anatomists, I always imagined that this last was a real continuation of the choroides; I am now satisfied that it is not, and that the assertion is very nearly as absurd as to affirm that the diaphragm is a continuation of the pleura, though the choroides adheres pretty closely to the sclerotica, near the insertion of the optic nerve; yet from thence to the ligamentum ciliare the correspondence is mostly kept up by blood vessels and nerves passing from one to the other. Here a close adhesion of the choroides to the sclerotica commences. At the middle of the superior and inferior parts of the eye it begins at the very edge of the sclerotica, bordering on the cornea transparens, but from thence to the two canthuses it gradually retires back on the sclerotica: the adhering part from the choroides, called ligamentum ciliare, is truly

tendinous, and forms an expansion or covering to the iris; withinside this are groupes of blood vessels from the arterial circle of the iris, proceeding in nearly straight lines as well to the pupilla as to the ciliary ligament. To prove that the iris is totally different from the cho-roides, and truly muscular, it is only necessary to observe, that the inside of the ligamentum ciliare, answering to its breadth, is fleshy and thicker than any other part of this body; its fibres proceed radiated, or nearly so, from thence towards the iris. Here the covering of the anterior part of the vitreous membrane commences, and so closely is this attached to these radiated fibres, that their impressions are sunk deep into it, and may be called the fulci of the processus ciliares. The first range of fibres on the inside of the iris is, in a human eye, about the breadth of a line; a kind of tendinous narrow and circular band closes this phalanx, and from thence proceeds a second row of radiated fibres thinner than the first; these also adhere and leave their impressions on the vitreous membrane; and that part of the iris which forms the pupilla is still finer than the last mentioned, rests on the crystalline, and is quite free from any adherence, by which means it contracts or dilates

dilates in proportion to the vicinity or distance of objects. Thus the convexity of the iris follows nearly that of the cornea transparens, and is occasioned by the protuberance of the crystalline; so that the idea of a posterior chamber of the aqueous humour must be for ever banished: nor is that of circular fibres belonging to the iris better founded in truth and anatomy. These last we are constantly told were formed for the purpose of contracting, as the radial ones were for expanding, the pupilla; but not to advert to a fact, which is, that the state of quiescence in the pupilla is its dilatability, which is evident, because when asleep, or in a state of inattention with respect to objects, we constantly find it so: I shall just observe, that there are none but radial fibres through the whole internal surface of the iris. That the convexity of the iris may be proved beyond a possibility of doubt, let the side of the cornea be pierced at its junction with the sclerotica by a lancet or cataract needle, and passed in that direction to the opposite side of the eye. On examination you will find, that, besides the cornea, you will have wounded the iris a line higher than the ligamentum ciliare. If you perforate another eye a line and an half higher

up

up on the cornea, it will just glide over the pupilla, and from this to the top of the cornea within is another line. If from the summit of the cornea a straight line be drawn, and parallel to one from the rise of the iris; *i. e.* the ligamentum ciliare at the sides of the eye, the distance will be found to be three lines and an half. Thus the distance between the rise of the iris and the pupilla, or its upper extremity, is generally two lines and an half, oftener more, measured from either canthus; but from the middle of the superior and inferior parts of the eye, as it lies in the orbit, a line less.

Idea of adherent Cataracts exploded; real Difficulties attendant on depressing Cataracts demonstrated, with the most rational Means of overcoming them.

Brisseau, Maitre Jean, Heister, and, in short, all oculists, whilst, as anatomists, they inform us that the crystalline is surrounded by a fine pellucid membrane, as operators, they are careful to tell us that the cataract frequently adheres to different parts of the iris. Heister, though his treatise *De Cataracta* merits high applause, seems so persuaded of this imaginary adhesion, that, in his surgery, he directs,

rects, when it is found so strong as not to be separated by the needle, to perforate the centre of the crystalline, in hopes of giving some small admission to the rays of light. Warner, who we should suppose always paid particular attention to this organ, though he tells us that the crystalline is invested by a fine membrane, from which it readily escapes by the least aperture, yet attempts to determine, as an operator, whether there be an adhesion of the cataract to the iris or not*; nor can his method of performing the operation of depression be approved of, seeing that he directs the needle to pierce the sclerotica at a very small distance from the cornea, by which means the iris must unavoidably be wounded. In a word, the adherence of cataracts has been the language of antiquity, and continues to be that of modern times; but it certainly is not the language of anatomy or reflection, for it is not the language of common sense. But before we proceed to explain what has given rise to this imaginary adhesion, the following practical remarks on the different humours appear very seasonable :

* Description of the eye and its Disorders, page 31, 32.

And first, as to the aqueous humour, it is a fact long established, that if, by a wound of the cornea, it escapes, it becomes in a very short time replenished; and the process of extracting the crystalline proves that this regenerated liquor is as well adapted to all the purposes of vision as the former. The vitreous humour, if partly or totally lost, never can be restored; but a wound of this body does not destroy its transparency, nor even injure it, as is demonstrable by the process of couching, which cannot be effected without not only wounding but separating parts of it, and forcing the crystalline through them. A wound of the crystalline is constantly followed by its opacity, as numbers of experiments prove, many of which are within my own knowledge; and a severe compression of it will produce the same effect. This lens, when fairly discharged from its capsula, and lodged under the vitreous humour, insensibly wastes away*; but I have had proofs that when it slips into the aqueous liquor this is by no means the case. A diseased crystalline, whether hard or soft, is constantly found smaller than a sound one; and its capsula or cover-

* Philosophical Transactions for 1730, No. 384.

ing,

ing, it may be affirmed, whilst entire, is always transparent, let the state of its interposed body be what it may. A wound of this membrane soon heals; and though by it Morgagni's liquor may escape, yet it also becomes soon recruited. Both these interesting facts are proved by couching; for if you fail of depressing the cataract ever so often, yet you may at length succeed; and though you should fail in this, yet you are certain to remove the opacity by extraction, which could never happen did not the different wounds of this capsula heal, and the inclosed liquor regenerate.

We will now suppose a person presents himself for the operation; the cataract is of a pearl colour, greyish or white; the eye feels plump, the pupilla contracts and dilates, and the patient distinguishes light and darkness: a better-conditioned cataract cannot offer, nor a fairer for depression. Let us now see what are the real, not imaginary, obstacles to the success of the operation: the needle pierces the sclerotic, we behold it, through the pupilla, lodged in the crystalline; the surgeon endeavours to disengage and remove the cataract; it seems, in part, obedient to the needle; as it is pressed down, the iris seems to follow it, but lighten

the force, and every part assumes its former place and appearance ; you renew your endeavours, and on pressing the cataract below the pupilla, and retaining it there awhile with the needle, the diaphanous vitreous humour follows it, and for the instant enables the patient to see objects ; the needle is now carefully withdrawn, and all parties congratulated on the success of the operation. It is, however, but transitory, for the parts return to their former situation, and any violence done to the vitreous membrane is removed before the eye is again opened. Let us suppose, in the first instance, that the operator sees the crystalline rising : persuaded that this is occasioned by its adherences, he freely pricks and wounds the processus ciliares, which are the internal parts of the iris, to break this cohesion ; the hæmorrhage disturbs his plan by destroying the transparency of the aqueous humour, and he withdraws his needle *re infectâ* ; or if he perseveres, he may have the credit of destroying the eye in forming this separation. Here are in one view collected all the proofs, and melancholy ones they are, of an adherent cataract ; but the description already given will clearly explain them. It is to be remembered, that the opaque crystalline

crystalline has a lodgement formed for itself in the anterior part of the vitreous humour; that it is surrounded on every side by a strong membrane, which is a continuation of that which covers the anterior part of this last body; that the proceffus ciliares, being the inside of the iris, adhere closely to this membrane in every part, even to the border or edge of the crystalline capsula, to which capsula the cataract has not the smallest adherence; the fossula, or bed, alone must give some degree of stability to the crystalline; but when to this we add its envelope, the covering of the iris, and its strong adhesion to the vitreous membrane, we must be convinced that nature has paid uncommon attention to the security of this body, and that no small pains and attention are necessary to displace it. Certain it is, that if a sufficient opening be made in the capsula, the crystalline may be thrown out of it by means of its contained liquor. But are the small-pointed needles, mostly used, well calculated for this purpose? They undoubtedly are not: they perforate this membrane, and stick in the crystalline, which is of a thickish viscous substance, often much harder than in its natural state. Pains are taken to remove this opaque body, but the

needle does not afford a sufficient passage for its exit; the parts are pressed down, and the vitreous membrane, and of course the iris, must yield to this pressure, from their connexions with each other, without the aid of any imaginary adherence of the crystalline or its capsula to the iris: but let us suppose the cataract fairly dislodged from its bed by a proper opening of its capsula; are there no other obstacles to its precipitation? There are, and considerable ones; the vitreous membrane and its adhesion to the iris oppose it; so does the density of the vitreous humour itself. These are now the real difficulties, and none other. It is for these reasons that the cataract sometimes slips into the watery chamber of the eye, which, from its tenuity, gives less resistance to it; and it is this circumstance that gave rise to Monsr. Daviel's method of extracting the crystalline.

To overcome these real obstacles, care must be taken, first, by a proper opening of the crystalline capsula, to give room to the discharge of this body; next, to dislodge it from its socket or bed; and lastly, to withdraw it to the posterior and inferior parts of the eye, at least to place it below the pupilla. Instead of the needles in use, I have mine flat, pointed, and
edged

edged like lancets, and, like them, gradually increasing in surface. The length of the incisive part is to its greatest breadth nearly as three to two; from the broadest part it rounds off gradually; and both the handle and blade are shorter than those of the common cataract needle. With this knife or lancet, moistened, the eye (if the left) is to be perforated in the sclerotica, at about two lines distance from the cornea lucida, at the external canthus. If for the right eye, and the operator is not ambidexter, a curvature may be made in the instrument, and the lancet should pierce the eye at the internal canthus, and at the same distance from the cornea transparens. Let it advance in nearly a straight line, (for it should have a small inclination towards the pupilla) and it will then enter into the side of the capsula. The breadth of the instrument alone will give a tolerable opening, which should be increased by a gentle elevation and depression of the sides (not the point) of the instrument. Push the point after this to the other side of the capsula, which is also to be opened, but without injuring the processus ciliares. Sufficient space is now left for dislodging the cataract from its bed, which the surrounding fluid will

facilitate; but if we fail in our endeavours the capsula will heal, and all will be to do over again. To effect this, the cataract should be gradually disengaged by gentle and nearly rotatory motions, and insensibly withdrawing it from before the pupilla, which the breadth of the needle seems well calculated for. When you behold it retiring from it, you should gently press it (but with the sides of the instrument) to the bottom of the eye, and there detain it for two or three seconds, or till the vitreous humour fills up the deserted place. Though a cataract thus depressed may rise a little, yet as it is effectually removed from its original place, it will insensibly fall again, and melt away; for I am to repeat it, that the success of the operation depends on a sufficient opening of the membrane, and pushing the opaque body from its natural resting place. If the cataract be in a dissolved state, the first perforation will give issue to it; and though it may appear to disturb the other humours, yet in a few days all will insensibly subside, and the eye clear up. There are other instances where the crystalline will be removed with very little trouble to the operator; but this only proves that its membrane is very thin, and the vitreous

ous humour not so viscid as usual. But notwithstanding the directions given to remove the crystalline, if it should still resist our endeavours, and if, by accidentally wounding the iris, blood should follow, in this case, when the operator is satisfied that the capsula is sufficiently dilated, he should immediately withdraw the needle, and press with his finger on the side of the globe opposite the perforation, and this will effectually dislodge the cataract, without any injury whatever to the eye, provided the pressure is not too violent, which the forcing out the crystalline does not seem to demand.

Having, I think, effectually exploded the erroneous doctrine of adherent cataracts, and given a more exact description of the parts interested in the operation, the true causes of the difficulties that occur in it, and the means of overcoming them, than has hitherto appeared, I shall now proceed to treat of the extraction of the crystalline, and propose an operation much more simple than that now in use, and attended with infinitely greater advantages to the patient.

• Of

Of extracting the Crystalline.

Wounds of the cornea have been long known to be attended with no danger or inconveniency, except from the cicatrice obstructing the rays of light; for the aqueous humour is soon restored. Pieces of the crystalline have been often known to pass into this chamber, and to be sometimes extracted by incising the cornea; instances of which are given by Mery, Petit, and St. Yves; and, encouraged by this success, Mery proposed to the Academy the extracting the cataract, by an incision of the cornea, as a certain cure*. It does not, however, appear that he ever reduced it to practice; and whatever applause is due to this method, M. Daviel is certainly entitled to it. He pierced the cornea nearly in a line with the pupilla, at the external canthus, with a cataract needle, and continued it in this direction till it passed through the opposite side of this coat. The side of a fine scissars was introduced into the first aperture, and the inferior half of the cornea was divided near the sclerotica; another needle opened the crystalline membrane; and by a

* Memoires de l'Academie des Sciences, 1707.

gentle pressure on the globe of the eye the cataract slipped into the aqueous chamber, and so down the cheek. Such, in a few words, is M. Daviel's account of this operation. Succeeding writers have laboured to reduce the operation to greater simplicity; for it was found that, besides the cicatrice from the wound, the squeezing of the blades of the scissars added considerably to the opacity. A simple instrument, something like an iris knife, has been recommended, and is generally used, to perform the entire incision of the cornea with.

M. La Faye* directs the cornea to be pierced at about half a line from the sclerotica, and to push it on in a straight line till it passes through the opposite side, when by a single inclination of the instrument the inferior half of the cornea is at once divided: nor need you fear, says he, to hurt the iris in traversing the cornea, as it is plane or flat in its surface, as Dr. Petit demonstrated in the Memoirs of the Academy of Sciences for 1728. Mr. Warner† would have the knife to be suddenly and resolutely pushed through the cornea, and passed in a straight

* Mem. de l'Academie de Chirurgie, Tom. VI. page 304.

† Description of the Eye, page 101.

line to the other side. Such also are the directions given by Sharp*, Bertrandi†, and all subsequent writers.

Never was operation received with greater applause, or more speedily and universally adopted for thirty years past, than the present. The avidity with which it was embraced proves but too truly the difficulty and uncertainty of that by depression, and the utility and necessity of the present memoir. For, notwithstanding all that has been said in its favour, I am not afraid to affirm, that never was operation less entitled to public estimation. This declaration is not the result of theory and speculation, but of sound practice. I have myself performed it both with the scissars as Daviel recommends, and with a knife of my own invention, and have frequently seen it performed by others, and never with success adequate to expectations. For, in the first instance, the semisection of the cornea leaves a cicatrice, by which nearly half of it becomes opaque, at least the rays of light cannot distinctly pass through it. But besides this defect, unavoida-

* Philosophical Transactions for 1753.

† *Traité des Operations de Chirurgie*, page 345.

ble by the directions given, there are other still more alarming accidents to be apprehended from the very manner of piercing the cornea. We see La Faye recommends the needle to proceed in a straight line from one side to the other, without fear of wounding the iris, which he tells you is flat. Warner desires it to be passed suddenly and resolutely ; and such is too much the practice. What are the consequences of this rule ? That the iris must infallibly be wounded ; and this accounts for the complaints on all sides, that a part, sometimes the whole, of the vitreous humour is discharged with the crystalline. Examine the projection of the iris and crystalline, and you must subscribe to this melancholy truth : but that no doubt should remain, let it be remembered, that if the iris be not wounded, no particle of the vitreous humour can escape by moderately pressing on the globe after opening the cornea. We have already noted that the anterior part of this humour is covered by a strong membrane, firmly adhering to the *processus ciliares*, except where it forms a sheath for the crystalline ; what then can pass through the pupilla by pressure but this crystalline ? The vitreous membrane, and the adhesion of the iris

to it, oppose any other, except the pressure be too strong; but even in this case the cataract must pass through first. If then a part of the vitreous humour escape, and a distorted iris follow, we must attribute both to an absolute misconception of the structure of the parts, and to erroneous rules, the consequence of it. Thus we see, besides the unavoidable cicatrice of the cornea, other and more alarming dangers are to be feared, even to the total loss of sight, notwithstanding the cataract is removed.

But may not the structure of the parts furnish some hints to render this operation more safe and certain? From a careful perusal of the foregoing very accurate description of them, I think it will; and the following is the *modus* I would recommend: — My knife is of the same size and figure of those used in this operation, except that it cuts at both sides from its point, and that the incisive parts are a little convex, the concave or inside of which should be marked in the handle. With the concave part next me I pierce the *sclerotica*, very near the edge of the cornea, suppose the third of a line, at either the external or internal canthus, according to the eye to be operated on. Instead of pushing it on in a straight line, as recommended,

commended, I direct the point rather a little towards the aqueous chamber than the iris, for fear of wounding this last, which its rising convexity exposes it to. The passage of the needle is proved by part of the aqueous humour's escape, and by your seeing its point, within the cornea, between it and the iris. You now incise the inferior side of the sclerotica, advancing the incision to the edge of the cornea *transparens*, as the adherence between the iris and sclerotica approaches closer to the cornea the farther you go from the sides of the eye. Without withdrawing the instrument you cut the upper side of the sclerotica in the same manner. The reason why the inferior incision is first performed is, that if you cut the upper side first, a little blood might oppose your carrying this inferior opening so very accurately afterwards. Thus nearly one side of the sclerotica, from top to bottom, at its junction with the cornea, becomes divided: with the point of this very instrument you prick the crystalline capsula, and the smallest inclination of it inside the pupilla will do this, and then gently press on the globe of the eye, the cataract will instantly slip out, and though divided into parts,

as it is sometimes, will with the greatest facility be extracted through the aperture.

By this simple mode of operating, very little, if any, opacity can appear on the cornea ; and though some may, yet, as it is at its very edge, from whence the rays of light seldom are transmitted to the bottom of the eye, no defect can follow ; whereas by incising half the cornea from side to side, and not confining the opening to its extremity, a very great opacity remains. I have made no allowance for the escape of the vitreous humour, because it cannot possibly happen except the iris is wounded, and a very little attention will ever prevent that.



VI. *An Account of a Monster of the human Species, in two Letters ; one from Baron Reichel to Sir Joseph Banks, Bart., and the other from Mr. James Anderson to Baron Reichel. Vide Philosophical Transactions of the Royal Society of London, Vol. LXXIX. for the Year 1789, Part II. 4to. London, 1789.*

THE extraordinary subject of this account is a Gentoo boy, named Peruntaloo, who was born at Popelpahdoo, seventy miles west from

from Mufilipatnam, and who, at the time* the two letters are dated, was living at Fort Saint George. He was then thirteen years old, and measured 4 feet 6½ inches in height.

He is said, by Baron Reichel, to possess a share of understanding superior to that of the generality of boys of his age; and is handsome and well made, if we except the præternatural appendage that constitutes the monstrosity. This appendage consists in the loins and lower extremities of a male suspended by the os pubis; an elongation of the xiphoid cartilage of Peruntaloo having anastomosed with the symphysis pubis of the semi-monster.

Baron Reichel remarks, that about the lower part of the loins of the semi-monster he observed an internal motion rather more conspicuous than in any other part of the body; and that upon questioning Peruntaloo, he shewed him that, by retaining his breath, he could force a current of air into them, so as to swell the parts like two blown up bladders, with a rumbling noise at the time of action. The Baron adds also, that the erection of the penis in the semi-monster, and the command Perun-

taloo has of discharging the urine through it, are facts perfectly ascertained.

Mr. Anderson, in a short anatomical description of the monster, observes, that the lower orifice of the stomach seems to lie in the sac or cylindrical cavity between the two brothers on the right side, and what may be reckoned the right hypochondre of the little one, as that part is tumid and full after eating; that the alimentary canal must be common to both, as the anus of the little one is imperforate; that there is a bladder of urine distinctly perceived, which occupies the left side of the sac, or left hypochondre of the monster; and that besides these there remain only the sacrum, ossa innominata, and lower extremities, perfect.

Mr. Anderson adds, that Peruntaloo says he has as complete a sense of feeling with every part of the body of his little brother (for so he styles the semi-monster) as of his own proper body; and this, Mr. Anderson thinks, may account for the erection of the penis of the semi-monster, and for the power Peruntaloo has of making water through it; but this volition, Mr. Anderson observes, does not extend to the legs or arms, which are cold in comparison with the rest.

Two engravings, from drawings made by Baron Reichel, illustrative of the subject, are given in the volume before us, to which we must refer our readers.

The account given of this monster reminds us of the “*frater pectori fratris adnatus*,” described and delineated by Bartholin *; and of another

* “*Lazarum Colloredo Genuensem Hafniæ primum vidi, deinde Basileæ, 28 annos natum, sed utrobique cum stupore. Fraterculus huic Lazaro in pectore erat adnatus, si rectè conjeci, ossè xyphoide utriusque cohærente. Pes sinister solus illi dependebat, duo brachia, tres in manibus singulis tantum digiti. Vestigia pudendarum partium com- parebant. Manus, aures, labia movebat, in thorace pulsus. Excrementa nulla minor frater excernit nisi per os, nares, et aures, nutriturque eo quod major assumit. Unde partes animales et vitales distinctas habebit, quum et dormiat, fudet, moveatur, quando major vel vigilet, vel quiescat, vel siccus est. Uterque etiam suo nomine ad baptismatis fontem insignitus fuit, major Lazari, minor Joannis Baptistæ. Naturalia vero viscera ut hepar, lien, &c. utriusque communia erant. Oculi clausi fere Joanni Baptistæ, respiratio minor, admota enim plumâ parum movebatur, admotâ verò manu exilem halitum calentem deprehendimus. Patulum ferè illi et hians os, dentibus prominulis, saliva perpetuò ferè madens. Caput videbatur solum omne alimentum in sui augmentum absumere. Prægrande enim et majus quam Lazaro, sed deforme, capillis supino situ dependentibus. Barba utrique crevit, sed Baptistæ neglecta,*

another monster of the same kind, of which an account *, accompanied also with a figure, is given in the works of Ambrose Paré.

CATALOGUE OF BOOKS.

1. **P**LANTARUM Icones hæctenus ineditæ, plerumque ad Plantas in Herbario Linnæano conservatas delineatæ. Auctore

“ Lazaro compta. Erat autem Lazarus justæ staturæ, corpore decenti, moribus humanis, et ad aulæ morem ornatus.
 “ Inducto pallio fratris tegebat corpus fovebatque, nec monstrum intus condi primo alloquio diceres. Animo ubique præfenti videbatur, nisi quod de fato subinde sollicitus, mortem fratris timebat, quod se fœtore et putredine extinguendum quoque præfagiret, hinc magis in curando fratre quam se laborabat.” — Vide Thomæ Bartholini Hist. Anatom. rarior. Cent. 1. Hist. 66.

* “ In the year 1530 there was a man to be seen at Paris, out of whose belly another, perfect in all his members, except head, hanged forth as if he had been grafted there.
 “ The man was forty years old, and he carried the other, implanted or growing out of him, in his arms, with such admiration to the beholders, that many ran very earnestly to see him.” — English Translation of Paré’s Works by Tho. Johnsen, folio, London, 1678, page 587. — See also, for another description of the same monster, Licetus de Monstris, ex recensione Blasii, 4to. Amstel. 1665, p. 83.

Jacobs

Jacobo Edvardo Smith, M. D. Societ. Reg. Lond. Uliffip. Agron. Paris. Socio, Soc. Linnæanæ Londinenfis Præfidi. Fasciculus I. Folio: Londini, 1789.

2. Hortus Kewensis; or, A Catalogue of the Plants cultivated in the Royal Botanic Garden at Kew. By *William Aiton*, Gardener to His Majesty. In Three Volumes. 8vo. *Nicol*, London, 1789.

3. Medical Inquiries and Observations; to which is added an Appendix, containing Observations on the Duties of a Physician, and the Methods of improving Medicine. By *Benjamin Rush*, M. D. Professor of Chemistry in the University of Pennsylvania. The Second Edition. 8vo. *Dilly*, London, 1789.

4. A Dissertation on the Process of Nature in the filling up of Cavities, healing of Wounds, and restoring Parts which have been destroyed in the human Body; which obtained the Prize Medal given by the Lyceum Medicum Londinense, for the Year 1789, and was ordered to be printed for the Use of the Society. By *James Moore*, Member of the Surgeons Company of London. 4to. *Johnson*, London, 1789.

5. An Account of the Nature, Properties, and medicinal Uses of the Mineral Water at

Nottingham, near Weymouth, Dorset. By *J. Crane*, Physician at Dorchester. With a View of its Well in its present State. 8vo. *Newberry*, London, 1789.

6. Speculations on the Mode and Appearances of Impregnation in the human Female ; with an Examination of the present Theories on Generation. By a Physician. 8vo. *Elliot*, Edinburgh, 1789.

7. An Account of the various Systems of Medicine from the Days of Hippocrates to the present Time ; collected from the best Latin, French, and English Authors, particularly from the Works of John Browne, M. D. By *Francis Carter*, M. D. 2 Vols. 8vo. *Murray*, London, 1789.

8. A Treatise on Fevers, wherein their Causes are exhibited in a new Point of View ; by a proper Attention to which, their Contagion (acruing from a contaminated Air) will be prevented ; and a Variety of Cases, as putrid Sore Throats, Inflammations, Fluxes, Influenzas, Consumptions, as well as low nervous Fevers that terribly affect the Spirits, may be cured with Ease. 8vo. *Scatcherd*, London, 1788.

9. A Treatise upon the Herb Tobacco, pointing out its delcterious, pernicious Quality, and
its

its fatal Effects upon the human Constitution, by the great Variety of Disorders it occasions; not only affecting three of the five Senses to a great Degree, but impairing the Faculties of the Mind, and even frequently causing premature Death. By a Gentleman of the University of Cambridge. 8vo. *Stalker*, London, 1789.

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E R R A T A.

- Page 175, for *uppurate*, read *suppurate*.
 — 213, line 23 from the top (in some copies) for *prevention*, read *formation*.
 — 259, l. 1, for *four years of age*, read *twelve years of age*.
 — 294, l. 8, for *eleven persons*, read *ten persons*.







